DOCUMENT RESUME

ED 082 784 LI 004 505

TITLE	Minutes of the Meeting (75th, January 17 and 18, 1970, Chicago, Illinois).
INSTITUTION	Association of Research Libraries, Washington, D.C.
PUB DATE	Jan 70
NOTE	165p.; (28 references)
AVAILABLE FROM	The Association of Research Libraries, 1527 New Hampshire Ave., N.W., Washington, D.C. 20036 ($5.00)
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	Conference Reports; Libraries; Library Associations; *Library Automation; *Management; Meetings; Participation; *Research Libraries; *Staff Role; *University Libraries
IDENTIFIERS	*Association of Research Libraries

ABSTRACT

The two major topics of the program portion of the meeting are automation and management. Allen B. Veaner's "Major Decision Points in Library Automation" is followed by notes from a brief discussion. Stanley E. Seashore presented main themes from "Staff Participation in Management," which is also followed by discussion remarks and a panel response. The bulk of this document contains reports from various committees of the Association of Research Libraries (ARL). Also included is a summary report by Douglas Metz on a university library management study. (Minutes of other ARL meetings are ED 067 115 and LI 004 506 through 004 512.) (SJ)

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Minutes of the Seventy-Fifth Meeting

January 17 and 18, 1970
Chicago, Illinois

LI 004 505

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[Princeton, N. J., etc.]

v. 28 cm.

Meetings are numbered irregularly: 9th-10th, 12th called respectively: 10th-11th, 13th.
INDEXES:
Subject index.

1st-42d, Dec. 1932-Jan. 1954 1 v.

Z673.A84 59-30046

Library of Congress [3]

These Minutes are printed on a stable and enduring paper.

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Ray Fry.....U.S. Office of Education
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Edward Weiss.....National Science Foundation

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Tulane University Library

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ASSOCIATION OF RESEARCH LIBRARIES

Minutes of the 75th Meeting

Chicago, Illinois

January 17-18, 1970

-

Douglas W. Bryant, President

-

The Seventy-fifth Meeting of the Association of Research Libraries was held in the Old Chicago Room of the Sherman House Hotel, Chicago, Illinois on January 17-18, 1970.

The meeting was called to order at 10:00 a.m. on January 17 by President Douglas W. Bryant.

Mr. Bryant opened the meeting by introducing the new and alternate representatives of member institutions and the guests of the Association who were in attendance. After reviewing the program details for the two-day meeting, Mr. Bryant introduced James Skipper, chairman of the ARL Automation Committee.

Mr. Skipper explained that the Automation Committee had agreed to develop a presentation on library automation for this initial portion of the membership meeting. The committee decided to ask Allen Veaner, of the Stanford University Library, to prepare a paper which would discuss the major administrative decisions which must be made if libraries are to utilize automation effectively. Mr. Veaner acceded to this request and drafted a document, which he subsequently circulated among the committee members and others for their criticism.

Mr. Skipper then introduced Mr. Allen Veaner, who presented and commented upon his paper, entitled "Major Decision Points in Library Automation." The paper follows.

[Editor's Note: This version of Mr. Veaner's paper is not the final version mentioned in the "Acknowledgments." It was still in preparation at the time these Minutes were prepared for the printer.]

MAJOR DECISION POINTS IN LIBRARY AUTOMATION

by

Allen B. Veaner

Assistant Director for Bibliographic Operations
Stanford University Libraries

Research reported in this paper was supported in part by
U.S. Office of Education grant OEG-1-7-071145-4428.

Prepared for the Association of Research Libraries
Automation Committee
James E. Skipper, Chairman

Chicago, Illinois
January 17, 1970

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10. NATIONAL GOALS & PRIORITIES

11. A SELECTED BIBLIOGRAPHY

ACKNOWLEDGEMENTS

I wish to thank the following persons who suggested topics for discussion or responded with critical comments on drafts, or both:

Paul Armer (Stanford University)
Henriette D. Avram (Library of Congress)
Joseph Becker (EDUCOM)
Ritvars Bregzis (University of Toronto)
Glee Cady (Stanford University)
Verner W. Clapp (Council on Library Resources)
Don Culbertson (American Library Association)
Wayne Davison (Stanford University)
Richard DeGennaro (Harvard University)
Diana DeLanoy (Stanford University)
Richard M. Dougherty (University of Colorado)
A. H. Epstein (Stanford University)
Paul Fasana (Columbia University)
Douglas Ferguson (Stanford University)
Nicholas Fortis (Stanford University)
Herman H. Fussler (The University of Chicago)
Robert M. Hayes (UCLA/ILR)
Samuel Lazerow (Library of Congress)
Stephen A. McCarthy (Association of Research Libraries)
W. F. Miller (Stanford University)
Eleanor Montague (Stanford University)
Edwin B. Parker (Stanford University)
Charles Payne (The University of Chicago)
Rutherford D. Rogers (Yale University)
Russell Shank (Smithsonian Institution)
Ralph M. Shoffner (U.C. Berkeley/ILR)
James E. Skipper (U.C. Berkeley)
Carl M. Spaulding (Council on Library Resources)
David C. Weber (Stanford University)

Not all reviewers' comments and reactions were on hand at the time this preprint was prepared for distribution. To avoid delay in mailing, additional comments and changes will be deferred and incorporated into a final version. Comments, corrections, and suggestions from readers are welcomed.

I am also grateful to the staff of the Stanford Computation Center for the dependable services of WYLBUR, an on-line text editing facility which enabled me to compose, edit and print for distribution the complete text of this paper without retyping.

Stanford, California
January 7, 1970

MAJOR DECISION POINTS IN LIBRARY AUTOMATION

1. INTRODUCTION

The main subject of this paper is change. Fundamental changes accompany the automation of library functions. Whether one employs batch operations, on-line techniques, or a mixture of the two, it constitutes a totally new way of life. When applied to a large central library, automation creates the most radical changes in library operations since the creation of libraries. This paper will not deal with single-application, small scale automation efforts, nor with those in branch or special libraries. Rather it is addressed to the factors and decision points in developing a major program of automation in the main research facility of a large university or research organization.

The early questions in deciding upon an automation program are concerned with the implications of radical change. What is the status of the current manual system? Is the time right for a change? What are the known or anticipated effects of major change upon the staff? Upon the faculty and students? What are the financial implications? Answers to these questions must be as detailed as possible and must be based on realistic expectations concerning the functions which are currently susceptible to automation.

What kinds of library activity can be automated in the present state of the art? Although much research and experimentation have been conducted on advanced systems of information storage and retrieval, it is clear that there is nothing yet on the horizon to rival the human brain and natural language for intellectual tasks of great complexity. Man is still the principal thinking creature, the one who can handle ill-structured problems and heuristic inquiry. But in the Library, he remains heavily burdened with routine tasks, or what is more accurately called FORMALIZABLE work. We have enough experience to know that in the present state of the art, the activity currently susceptible to change through automation is this formalizable, housekeeping work. Hence, the candidates for automation are of two kinds: repetitive tasks and those jobs which are deterministic and highly structured. They must involve relatively few intellectual decisions or decisions which are both repetitive and of a comparatively lower order. "Is this number bigger, equal to, or smaller than that one?" "Is this date earlier or later than another?" Formalizable activities are also the hardest

to change because habit and custom govern their performance, and when it comes to routine, there is nothing people prefer to do over what they are already doing. Thus, immediately upon embarking on even a study of automation, one enters a political thicket; at issue are performance norms, standardization, organizational structure and reporting patterns, job analysis, time and motion studies, reassignments, retraining, and the upsetting of all former social and occupational stability. In summary, the question is: How prepared are you to foster change in your organization? Are you willing to employ staff whose mission is challenge, evaluation, and change of your program?

The methodology of introducing change has itself changed radically. Gone are the days of changing procedures by administrative memo or unilaterial fiat. Intrainstitutional competition for funds has become public knowledge and is forcing the revelation of administrative and economic realities which might previously have remained behind the scenes.

Ideally, a new system of doing anything should sell itself because those directly affected by the change have already fully participated in its development. This makes good sense because no level of staff will be unaffected by an automation program. After all, everyone will have to live with the new system. Nevertheless, much work remains to alleviate the still prevalent fear and anxiety of job loss or takeover by machines. In a recent LJ article, Jacques Barzun states that "mechanical work is the computer's meat; as a source of INTELLIGENCE it is a total loss." In comparing the human brain and the computer, Orlicky points out:

> When we discover areas of mental work in which we can outperform computers, we tend to regard computers as sluggish or clumsy, but perhaps a more proper way of looking at it would be to realize that the particular task is extremely difficult and that our own ability in this respect is outstandingly high.

The critical articles and books cited in the appended bibliography - and the experience of the past five years - reveal how remotely far we are from any miraculous software which will overnight transform our research libraries into "knowledge banks" capable of giving the right "answer" to any query, no matter how ineptly articulated. Given these limitations, selective staff involvement at all levels is the sine qua non of an effective automation program; if it does nothing else, it will dispel the many misconceptions about systems analysis and computers.

A basic assumption I'm going to work with is that we have a finite amount of human and cash resources. A further assumption I'm going to use is that people costs are rising much faster than unit machine costs, while

the productivity of people in the library has hardly increased at all. A striking illustration of increased employee productivity in industry is a recent FORTUNE article on the Toyota Motor Co. of Japan. Here is how productivity of Japanese automotive employees changed in 20 years:

1949: 1.5 cars/year/employee
1965: 20 cars/year/employee
1968: 28 cars/year/employee

We can demonstrate no such productivity increases in libraries; in fact, the opposite is likely to occur. As long as total productivity is a linear function of the number of employees, more staff and more supervisors will always be needed to control the ever growing intake of publications and the spreading demand for library services. Correspondingly, the more costly a resource of declining productivity, the greater the net cost of a given output. Unit processing costs in the library must inevitably increase unless aided by machine processes. This fact and the universality of computers as a general purpose tool are the main force behind Dolby's contention that the computerization of cataloging is not only desirable but inevitable.

The administrator considering an automation program faces two problems: (1) How does he allocate his limited resources? (2) What can he do to increase the productivity of his employees? Neither question can be answered without intimate knowledge of the present way of doing things.

2. UNDERSTANDING THE PRESENT SYSTEM

A prior requirement for any automation activity is a thoroughgoing, comprehensive analysis of systems and procedures currently in force. It is essential that analysis be carried out without any preconceptions or prejudices for or against automation. The determination of unit costs and unit times, as well as peak loads, are among the most needed data for making any kind of management decision on the desirability or feasibility of making changes. It may be discovered that change is neither desirable nor economical in certain areas. The conduct of a detailed analysis and evaluation is in itself a major task which in a large library can easily consume five to ten man-years. The analysis task must be managed by a knowledgeable system user - a librarian who is motivated to innovate; the more machine knowledge he has, the better.

You get what you pay for in systems analysis; a hasty or superficial job may offer some enlightenment on library processes, but is unlikely to be of much aid to automation planning. Once analysis has been done, the director is likely to learn that his organization is more dynamic than he thought it was, but in an uncontrolled way: all kinds of changes, many

unauthorized or undesired, creep into organizations which have no regular procedures for monitoring or documenting change. Control over change is one of the important contributions made possible by systems analysis, and this is a benefit independent of any decision to automate or not.

The above suggestion implies that a systems effort is a continuing activity, not something done once under the assumption that facts once obtained remain stable and fixed. Systems analysis is also a full-time activity; it is impossible for any staff person charged with operations to conduct systems analysis. What should be the ratio of systems analysts to employees? If there are two support staff for each professional, it is probably reasonable to have one full-time analyst for each fifty persons on the technical processing staff, inclusive of file oriented functions, such as circulation. However, this is merely suggestive, not prescriptive. It is wise to be wary of "rules of thumb" in automation; task complexity and style of institutional organization will be determining factors.

Ideally, an analyst is a librarian, though excellent results can be obtained from a non-librarian if he meets the selection criteria described herein.

> (Analysts normally act in an advisory capacity to management. They are responsible for design and training and the preparation of procedure manuals, but they should not be expected to run a new system. This is the responsibility of the incumbent staff or such new staff as may be required. But the analysts may need to watch carefully a production operation during its early stages, i.e., before the operation is reliable enough to turn over to the regular staff of the library. Because it is difficult to predict the duration of a prototype activity, any effort applied to supervising ongoing operations is effort not available for analysis and design of other functions. This problem of resource allocation can affect schedules, but it is too hazardous to turn over to the production staff any operation that is not completely dependable and reliable).

3. POLITICAL ASPECTS OF TASK MANAGEMENT

A. Extra-Library Assistance

The task of systems analysis and design cannot be delegated to any group of outside "experts." The users play the crucial role in both analysis and design. Technical people bring their own prejudices and a very imperfect knowledge of the mission and procedures of a given organization. To cite Orlicky again:

> A system entirely developed by experts is likely to reflect pet theories of the computer specialist--his notion of how the business should be run--and is equally likely to fail in practice, because his technical expertise is not necessarily coupled with business experience and judgment.
>
> The system specialist probably has a limited, inadequate understanding of the business function being automated--a fact he may not be aware of. Letting the systems man carry the whole burden of system design is both risky for the business and unfair for him. The business manager will be wiser to learn something about systems and computers rather than depend on the technical experts to learn the business.

In both business enterprise and in libraries, what can be delegated is programming and the technical methodology of implementing a system after management has decided what to do. Still, such contracted work will require the constant oversight and monitoring by the systems analyst/designer and librarian to assure design integrity. A team approach dominated by a high regard for the quality of interpersonal relations is essential to success.

Where will the managerial talent come from to run an in-house development effort? If you "grow your own," the orientation and educational task will be minimized. If you must go to the outside, how will you merge bibliographic and computing talent in the same person?

Suppose you decide to delegate part or all of the technical (i.e., programming) task to an agency outside of the library. In this case, "outside the library" can just as well mean another agency on campus. A favorable political climate is a prerequisite to the success of this method. Affiliation with a local research project in information retrieval or with a scientific computing center is attractive, because there is a vast reservoir of intellectual talent--the scarcest resource in any automation task. However, such alliances can be biased equally by research interests on the one hand and implementation interests on the other. The intellectual challenges behind tough software problems are the stuff of life for the best people--the only people you really want working on hard problems. In trying to find the most efficient logical solutions, a programmer can easily be deflected from development aspects. A mutually challenging set of tasks should be determined which appeals to both sets of interests. To satisfy these conflicting motivations takes a project manager with unusual catholicity of perspective.

B. Personnel Characteristics, Selection and Salaries

C. W. Hanson, a British worker in information research since 1941, has filled fifty-six vacancies. He states that mutual liking and respect between the administrator and the system development head is the most powerful factor in getting a job well done. He also confesses the most difficult to detect personal characteristic is laziness. For junior employees, he regards the most valuable characteristic as willingness to work conscientiously at a dull job, an indication that there is plenty of dog work in computerdom. In all, personal judgment has to be leaned on heavily. It is very easy to make a mistake in hiring a programmer or software designer; this type of error is extremely difficult to undo because of your prior investment. Before taking any precipitous action, it would be well to seek advice from a consultant to determine when corrective action is possible.

Suppose that one has decided to mount an in-house automation effort, how does one get help with staffing? Judging the talent and performance capability of software people is not within our normal expertise. Even the experts have their troubles, as Hanson has indicated. Unless the librarian has learned a great deal about computing--possibly even learning some programming himself--he cannot reliably evaluate a candidate for systems analyst or programmer. You may recall that the ACLS report, ON RESEARCH LIBRARIES, closely parallels Orlicky's advice for businessmen, namely that there is no alternative to the librarian's learning the computer art:

> Some programming experts must be brought into libraries but, more important, librarians must learn to use computers and must come to understand their strengths and limitations. This education process will take several years under the best conditions. From experience in other fields we can emphasize that there is no alternative to LIBRARY EXPERTS LEARNING COMPUTATION. Any other course will lead to inferior results with great waste of money and effort.

We have no contraindications to this advice, which I can heartily endorse. Librarians responsible for systems efforts must learn programming. We will nevertheless continue to depend upon knowledgeable people on campus, such as the staff of the scientific computation center or the administrative data processing center. Such assistance will be valuable, however, only in proportion to the degree to which the librarian is capable of making his goals understandable to these outsiders. The difficulty of explaining an application will vary directly with its complexity, and if the creation and manipulation of bibliographic data are involved, one needs a long period of orientation and instruction before the simplistic assumptions of the non-librarian are willingly laid aside. About one man-year should be allotted for training and orienting each non-librarian

sufficiently that the systems librarian can be confident that the details of a bibliographic application will be well understood.

It is common to divide systems development staff into at least three categories: systems programmers, applications programmers, and systems analyst/designers. Systems programmers work with and write the programs that offer to the applications programmers certain essential machine facilities, such as terminal access, special compilers, languages for writing applications programs. Systems programmers may earn from $12,000 to $18,000 or more in universities, less in colleges or installations having less powerful equipment. Systems programmers are far removed from the ultimate users of a system. The applications programmer writes the programs which actually execute user defined tasks, such as printing catalog cards from MARC tapes, creating overdue notices, issuing purchase orders, and the like. The analyst/designer is the person who gets right out with the users of the system and learns thoroughly their work, determines their requirements for a future system, obtains the facts on system loads and peaks, and a vast array of other factual and statistical data which must be known in intimate detail before any programs can be written. These categories of people are very different from each other and sometimes they don't speak the same language; in most cases, it is not all practicable to think about using them interchangeably.

Because he interacts directly with the user, the analyst/designer can make or break an application of automation. The analyst must be personable, patient, respectful of the librarian's expertise, willing to learn, sensitive to the feelings and fears of the operating staff in the existing system. It is wise to be on guard against any candidate who appears abrasive, "smart alecky," likely to intimidate, or who feels that he already knows or can learn with little effort all that there is to be known about an application.

Programmers are different. Some are gregarious and sociable; others are loners. Most will prefer to work with the intellectual challenge of the application as described by an analyst rather than work directly with the user. (Besides, there is little challenge left after someone else has flowcharted a solution; all that remains is coding and checkout, tasks usually assigned to junior programmers.) Experienced programmers and users hardly ever speak the same language and can often misunderstand each other when they do get together. The qualified systems analyst knows enough about both worlds to be an effective go-between. But to guard against the development of air-tight compartments, interested programmers should always be encouraged to learn the details of an application. A continuum of knowledge should be promoted throughout the staff.

You're probably already aware that programmers rarely work regular hours: they may come in late in the morning because they've been working

until 2 or 3 AM debugging a program. Irregular hours are a privilege they must have and any attempt to regiment programmers into a regular 35 or 40 hour week will result in getting much less than 35 or 40 hours of work from them. The programmer may need to work quite late in his office, beyond normal building closing hours, and this introduces questions of security, employee safety, and policy - such as keys to the building.

The management of programming--which is just a subtask in the total effort--is complicated by the contradictory requirements for good programmers and efficient managers. The star programmer isn't necessarily the good manager; he may be too introspective, too intellectual. This should not be surprising; our best catalogers aren't necessarily the best heads of cataloging departments. Yet a communicative manager lacking detailed knowledge of machines and programs cannot manage programming effectively no matter how good his managerial talents are. Because first-rate programmers are both desirable and mobile, the management of programming can be a delicate task. The successful manager breaks down a complex of tasks into "bite size" chunks and negotiates a completion date with each programmer. In choosing a manager, it would be useful to obtain some documentation on the degree to which he was able to get his staff to meet the schedules mutually agreed upon.

A hazard every manager has to look out for is the tendency for the design staff to prefer hypothesizing systems over the rather less glamorous, grubby work of detailed analysis or the agonies of checking out and debugging programs. In short, developing a system is fun, but implementing one is work!

Another key to evaluating the manager is his ability to build a team for the total effort. Many different kinds of talents must be welded and conflicts of interest resolved; what applies to the management of programming impinges upon the total program with even greater effect.

System development is expensive. A yardstick from industry indicates that it costs about $35,000 to support a systems programmer for one year. Suppose that he is paid $15,000; this might come to some $2,000 per month inclusive of overhead, to which are added his requirements for machine test time. Machine time for testing might cost up to $1,500 per month, though he won't spend that much every month. His rate of expenditure will vary in accordance with task complexity and his own accuracy and efficiency, and of course, in accordance with the pricing algorithm of the given installation. For library system development, I can cite one example. To develop the program for converting an incoming MARC tape to Stanford's local, internal processing format cost $8,000 in man and machine resources, inclusive of overhead. These are development costs, not operating expenses. The estimation of machine costs requires explicit information on specific program steps, machine configuration and pricing algorithms,

the amount of execution time and utilization of other machine resources, the type of data being processed, and the general system complexity. An experienced cost accountant is really needed to interpret and break out the components of computer costs.

The salaries commanded by high quality analysts and programmers will come as no surprise to this group. What may come as a shock is that one may have to pay more than one's own salary to recruit the right talent--this is particularly the case for large scale applications which involve a degree of sophistication beyond normal batch processing. The larger the institution, the higher must these salaries be, because bigger organizations inevitably have more highly sophisticated computer services, which in turn require and attract higher priced people. Sometimes one hears the complaint that there is a "shortage" of qualified computer people when what one really means is that someone does not wish to pay the salaries necessary to attract the desired people, or some institutional or legal constraint does not permit making the right offer. Sharpe makes this point very clearly and states that using the word "shortage" in this context merely confuses the issue. The difficulty of explaining to the staff the high salaries paid to these non-librarians is probably not foreign to this audience.

C. Space and Equipment

How much high quality space are you willing to commit to a continuing automation program? We've identified at least four kinds of space: private offices for analysts and programmers, conference and meeting space, machine and equipment rooms, and, for those having access to programming terminals, soundproof terminal rooms separate from the programmer's office. Actually, software staff needs to be shielded from noise of any kind--typing, air conditioning equipment, and the like. If programmers are recruited from industry, they may be accustomed to accommodations which are more luxurious than those we are used to. Ninety square feet is certainly marginal for programmers and designers, owing to the need to spread out papers; 120 square feet is preferable. A rapid photocopying machine is indispensable to any system design effort.

We have learned that space considered entirely adequate for library purposes may be pronounced unacceptable or uninhabitable by the automation staff. The cost of renovating or upgrading existing space is naturally a function of local costs and the age of the plant. But once prime space and special privileges have been granted, they are impossible to take away; they are equally impossible to explain to the rest of the staff.

4. FORECASTING WHETHER AND WHAT TO AUTOMATE

A thorough analysis of current systems should provide the administrator with information on the flow of material and data, the allocation of personnel, the organization, content, and use of files, and a complete inventory of forms (plus where they originate, what they do, and where they end up). He will also obtain a profile of unit costs for various tasks within each library function of each subsystem. Working together with the systems analyst, programmer, the staff of the computation center, and the policy makers of the university, the librarian should be able to identify not only the high unit cost items and high total cost items in this profile, but also those which are technically feasible for and readily susceptible to automation. There is no simple formula to define "readily susceptible to automation." This will be a function of the unique combination of machine and people resources present at a given institution and the director's own priorities based upon his program. It may be that some of the high unit cost items cannot be aided by automation in the present state of the art; similarly, there could be a number of low cost functions which occur in sufficient quantity to justify computer applications. For example, there is little doubt that circulation is one of the most profitable areas for exploration in any modern computer environment. But at this time, the computer is likely to be of little immediate, economical aid to any intellectual task, e.g., original cataloging. A good text editing system, though, can simplify and speed the clerical aspects of copy preparation and card production.

There are three major practical reasons for undertaking the automation of library functions: (1) To do something less expensively, more accurately, or more rapidly; (2) to do something which can no longer be done effectively in the manual system because of increased complexity or overwhelming volume of operations; and (3) to perform some function which cannot now be performed in the manual system--providing always that the administrator actually wants to perform the new service, has the resources to pay for it, and is not endangering the performance of existing services for which there is an established demand.

In this connection, the mere capability of performing a given function by computer is not a sufficient reason for doing it. The technician is likely to believe "If we can do it, we should." The industrialist will assert "If we can make a profit, we should do it." The director of the library must decide whether that is the thing he really wishes to do in terms of his program, his budget, and his clientele.

What are some of the things worth looking at in the near future? In A FIFTEEN-YEAR FORECAST OF INFORMATION-PROCESSING TECHNOLOGY, George Bernstein reviews a wide range of future possibilities through interviews with leading technologists. Using a scale from 1 to 9, interviewees rated

a large number of predictions for both desirability and feasibility:

	Desirability	Feasibility
1=	Undesirable, but possible	Unlikely, but possible
5=	Desirable	Feasible
9=	Highly desirable	Highly feasible

Given this scale, it is interesting to examine some specifics of special interest to librarians and information scientists. In the chart below, undelimited numbers correspond to the dates when the given item was reasonably expected to be achieved by fifty per cent of the technologists; dates in parentheses represent the experts' optimistic guess, and those in brackets their pessimistic estimates:

Theorem	Desirability	Feasibility	Year Accomplished (Optimistic) [Pessimistic]
Use natural English language for file inquiry and update	8	4	(1974) 1976 [1985]
Access library data on home TV	5	5	(1980) 1990 [2000]
Laboratories to be replaced by computers	1	1	(1985) 2000 [2100]
Print materials to decline in favor of soft copy and high density media	2	1	(1978) 1980 [1987]

In the light of the many predictions of the decline of the book, it is instructive to note the low desirability of the change to micromedia and screen display, and the relatively long time scales predicted for achievement. However, in the opinion of some other technical forecasters, Mr. Bernstein may be overly optimistic about the first of these items and too pessimistic about the latter three. We already see wide use of soft copy and micromedia in business and industrial information systems. And there

is hope that new developments like COM (Computer-Output-Microfilm) could have a significant impact upon the method of disseminating bibliographic data, nationally, regionally, and locally.

Not long ago the computer industry promised the miracle of time-sharing: one large machine doing all the jobs for a large community of users. The manufacturers and the software houses grossly underestimated the intellectual complexity of this task, just as some of us (fewer, I trust) have consistently underestimated the difficulty of automating bibliographic operations. In the present state of the computer art it is an extremely difficult intellectual challenge to combine in one machine the diversity of functions and tasks hoped for when the concept of time-sharing first became popular. With regard to the difficulties of library automation, an encouraging attitudinal shift is now evident. From a "trivial" problem, library automation has emerged as THE intellectual challenge, rivalling information retrieval. H.R.J. Grosch, director of the Center for Computer Sciences at the National Bureau of Standards, has pointed out that we need not hardware but a software hero to solve the problem of natural language interaction with computer systems.

There is, of course, always a substantial distance between the availability of a device or technique and its actual application. Oettinger has outlined carefully the long, arduous struggles between conception of a device or technique, the building and testing of prototypes, and their emergence into production. In discussing the properties of educational devices, he cites the following factors to be considered in applying innovative resources: flexibility, generality, parallelism of access and simplicity of scheduling, quantity available, physical accessibility, reliability, ease of maintenance, degree of complexity, comfort for the user, and standardization. He also demolishes the idea (so glibly promoted by hardware salesmen) that possession of a device is synonymous with change of habit.

Leaving aside practicality for a moment, a fourth justification for library automation activity is research--to learn whether certain new functions can be carried out with computer assistance, and if so, how to do them. The library community should neither abrogate nor delegate its research responsibilities. However, it is advantageous to integrate a variety of talents in complex computer applications. The stimulus of the non-librarian working together with librarians can aid in making sure that we do not suffer from "tunnel vision" and try merely to apply the new technology in the context of the present limitations. These dangers are well delineated in SDC's report, TECHNOLOGY AND LIBRARIES.

5. FACILITIES

A. Choice, Priority, Time

Ideally, the library ought to have under its own direct control all the necessary resources for complete system development. This is hardly ever achievable. The larger and the more complex the institution, the more likely is its computer facility to be complex and centralized.

According to a report prepared for the RECON Working Task Group, library use of computers suffers two major handicaps: low priority for machine use and insufficient machine time. One way of dealing with these problems is to buy a significant interest in the machine. Another is for a number of neighboring institutions to form a consortium or processing center, or to utilize commercial services. Where the workload of a single library may not suffice to interest a computer facility, combined purchasing power may carry more weight. Still another method for overcoming problems of priority and time relies on prior, local political settlements, but in the end this method may not be the most efficacious. A problem-oriented solution is always better, and a great deal of work needs doing on the formulation of appropriate problem-oriented strategies for gaining computer support in library automation.

Libraries consume vast amounts of storage, use a lot of machine resources for input and output, such as keyboarding purchase orders or collecting circulation transactions, printing catalog cards, and the like. Except for very complex software tasks--such as format recognition programs proposed in the RECON report and now being worked on--most library applications involve very little actual computing. They tend to be "input/output bound" rather than "processing bound," hence are much more closely allied to the operations of an administrative data processing center than to a scientific computing center. However, it would be misleading to suggest that this mere similarity in itself will be productive if much experimentation is involved. Oettinger points out that:

> ...as many computer centers of all kinds have found out to their despair, routine scheduled administrative work and unpredictable experimental work coexist only very uneasily at best, and quite often to the serious detriment of both. Where the demands of administrative data processing and education require the same facilities at precisely the same time, the argument is invariably won by whoever pays the bills. Finances permitting, the loser sets up an independent installation.

Turning to the scientific center, we see that its mission is to supply fast turnaround service to the research community. Its management

generally does not look favorably upon file-oriented applications, because the machine overhead necessary to manage these functions detracts from the center's ability to service its clientele. Indeed, if there is any sophistication whatever in the scientific system, the number of competing users rises faster than the capacity of the system to meet demand, and this will certainly affect adversely any application not within that center's mission.

B. Dedicated or Shared Hardware

Dedicated hardware involves high fixed costs of equipment and personnel; shared hardware involves high variable costs for services performed, but if proper contracts have been negotiated, the user has some control over the kind and amount of services he purchases. Graphically, installing your own computer represents a large step function in cost, while easing your way in through purchased services is a staircase function.

A convenient feature of dedicated hardware is that you are beholden to no one, save the computer manufacturer, the telephone company, and the electric power company! But only your applications can be run on the machine and questions of priority and sufficiency of time do not exist; in fact, one may have time to sell. The type of machine one can have all to oneself will probably be a stripped down model with a limited repertoire of software "smarts," and accommodating few peripheral devices.

A crew is needed to run the dedicated machine: operators to mount tapes, feed in decks of cards, and tear off and distribute printouts; systems programmers to maintain local software and keep the manufacturer's software and documentation up-to-date; and an administrator to schedule utilization and maintenance. It is also handy to have an external work load for idle time to help pay the rent. Also required will be backup arrangements so that operations can function on another facility during planned or unplanned downtime. Every computer will need the usual, special air conditioned quarters, raised floor, stable source of electric power, and a certain number of hours per week of scheduled downtime for maintenance.

There are two very powerful arguments for not having one's own small computer: (1) First, a small taste of the things one can do inevitably gives one an appetite for more sophisticated applications. The capability of the small machine is soon exhausted; changing to a larger computer may require a change in the operating system or programming language, either of which could require a lot of reprogramming. (2) The second reason is that small machines and small installations do not attract the intellectual talent needed to assure the most efficient use of machine resources. The better people naturally gravitate to the more sophisticated installations.

An alternative is to associate with a larger facility to take advantage of peripheral storage, special output devices (such as terminals), and the scarce resource: talent. Because very little calculational computing is done in library applications, it may be possible to satisfy a local need with a "mini-computer" if the small machine can be used as a terminal for the central facility. But this kind of interconnection or networking is a substantial software task in itself.

Assuming that it is better to pay for service from a computation center, what kind of facility should be used? The differing job characteristics in scientific and administrative applications have already been mentioned. One interesting possibility is to associate administrative data processing and library functions. Both perform little computation, require a great deal of input and output, and are file oriented. A facility working several shifts might service the library by day and the controller by night. To my knowledge this idea is not functioning anywhere and, following Oettinger's comments, the idea may not be as attractive as it sounds at first. Administrative data processing is oriented towards "fixed field" applications, whereas library usage involves variable length records with many special graphic characters. Administrative applications are further characterized by large workloads which often require two or three shifts; their timing schedules are critical owing to payroll and tax calculations and the month-end loads imposed by the task of preparing budget statements for thousands of cost centers. Also, an administrative data processing center is generally about one software generation behind a scientific center, and its systems programs may not be as efficient. However, an administrative center is likely to be much more sensitive to matters of file security.

Ultimately, the research library looms as the largest, continuous consumer of computer power on the compus. When that time comes, it is entirely conceivable that libraries may dominate the campus computer realm. No other agency on campus affords more intellectual interaction with the academic community than does the library, which is exactly the reason why it is important for large libraries to continue experimentation and push research in library automation. A failure to aggressively push research on bibliographic applications could lead to second-class computer applications and could put libraries many years behind other research components of the academic community.

C. Networks

Demonstrations of electronic networking have now become routine, but it would be misleading to believe that the establishment of regular, error-free networking is just around the corner. Existing telephone networks were designed for voice communication, not data transmission. Much old equipment is still in use; even though electronic exchanges are

being rapidly installed, it may be 1980 or later before new technology is fully applicable to land lines. (At present, only 2% of the Bell System's 12,000 central offices utilize electronic switching, and Bell estimates that to complete a nationwide switch to electronic communication switching centers--even at the present rapid rate of installation--will take from 20 to 30 YEARS and will require expenditures of $600,000,000 EACH YEAR.) The use of long distance lines for voice communication is rising about 15% per year. AT&T Vice Chairman John DeButts was recently quoted by BUSINESS WEEK as stating that "75% of the total interstate facilities required in 1980 have yet to be built." New and higher tariffs aggregating almost two-thirds of a billion dollars have been filed; these are on top of increases totalling $137 million which were granted in 1968/69. And there are many companies competing for the production and marketing of "interconnect" equipment. Accompanying the juncture of telephone and non-telephone interests are issues of performance standards, reliability, and technical standards, including establishing national use of the new ANSI (formerly USASI) code for data interchange and telecommunication. It is also apparent that the problems of networking, even in the local environment, are of no small intellectual and technical depth, and it would be folly to imagine that a large number of independent local networks are going to interact successfully on the first try. In all, many technical and economic hurdles remain; a common hope of all educational users is the planned educational communication satellite which might assist in reducing transmission rates and increasing reliability.

D. Pricing Computer Services

Exactly how one prices centrally furnished services is at times a matter of conjecture but invariably one of controversy. The overhead cost of running a center is considerable--two and one-half to three times the straight hardware rentals--and includes physical plant, hardware maintenance contracts, software maintenance, user education (no longer furnished free), large quantities of published documentation to procure and maintain, salaries and staff benefits, insurance for equipment, electric power and air conditioning, full rental for equipment which may be only partially utilized, failsafe auxiliary power, paper, spare disc packs, telephone service, travel to computer conferences.

Any time a peripheral device is attached to a computer, there is an associated software overhead. Someone has to write the software which makes that extra device work within the local software environment. Since each environment is unique, the vendor's software is sometimes a square peg. That is why every computer center needs a good supply of systems programmers and why additional devices require payment of a surcharge or "installation fee." But unlike a telephone installation charge, the "installation fees" for computer peripherals can never be one-time charges because computer systems are never static. Many changes in the system

software are reflected in the particular set of programs governing the performance of peripherals.

Computer resources are a very peculiar quantity. In any installation, there is a finite and measurable amount of computing power, although the users would like to behave as though there were an infinite amount of the resource. All pricing schemes are designed to ration the fixed resource in accord with the value of a particular service to a given user. Flexible pricing schemes have been devised to control the user's behavior in the hope of distributing equitably the costs of all available resources. Flexible pricing divorces pricing and costing, often lowering below cost some resource to encourage greater use of another associated resource, which if charged according to its true cost, would be prohibitively expensive for the user.

The good pricing algorithms recover total operating costs inclusive of overhead. Thus, in a large scientific center which may be terminal oriented and whose mission is scientific data processing, there are two actions which slow down service to the majority of users: mounting tapes and changing forms in the printers. To discourage these activities a special service charge may be imposed. Likewise, to balance the load on the machine (and to balance the budget), special low rates may be offered in the overnight service block or corresponding extra charges imposed during the day to run urgent jobs at a high priority.

One more observation: Although unit machine costs are going down all the time, the more one has of a cheap resource--like quick photocopying, for instance--the more one is likely to use it, and the net effect may be more money spent. It's the total expense that counts, not the unit cost. Consequently, the more facilities automation gives us, the more likely are we to need more resources rather than less.

E. Change As a Way of Life

One final question on the use of a central facility: What protection does the user have if the central facility decides to change its hardware or software? A change is only inconvenient for the transient research population but it is catastrophic for any continuing function like the library or the administrative data processing center. Written negotiations may offer some protection, but these tend to be political and are never as satisfactory as problem-oriented solutions in the end. In any case, it would be self-deceptive to believe that any system design can be frozen forever. Hardware and software will change continuously; the rate of change needs to be controlled and stabilized.

Any major system change will affect forms, files, personnel allocation, procedures, and organizational structure. A change in any of these areas involves a training responsibility for the systems staff plus appropriate sensitivity to interpersonal relations.

6. TIME SCALE FOR SYSTEM DEVELOPMENT

What are your expectations concerning the time scale to design, install, and operate an automated library subsystem, such as circulation or acquisition? Shoffner has pointed out that much early design work was based on the assumption--now known to be false--that existing library operations were already known in considerable detail. To provide this detail in the form necessary for adequate system design work is very time consuming, and the failure to realize the required time commitments is responsible for much of the slippage observed in current projects. Let us examine some predictions of time scale for a variety of proposed systems.

The King report in 1963 estimated it would take ten years to automate the Library of Congress. The INTREX Planning study in 1964 projected five years of planning before a system could be operational. Stanford University estimated in 1967 that three to five years might be required to implement a library system geared to on-line computer facilities. In 1968 Launor Carter, of System Development Corporation, estimated that five to ten years would be needed. In 1969, Philip Morse of MIT estimated ten to twenty years as the time scale for large system development. Thus, excepting for the Library of Congress estimate--which involves a scale factor beyond any other research library--as time has progressed, predicted time of achievement is receding farther into the future. Still we do not witness in regular operation any "total system," though several libraries have implemented subsystems with varying degrees of success. Even so, success as measured by a system description in the published literature may be different from that revealed by a site visit and conversations among those actually using the system. There is also no certain evidence that current systems are properly auditable or reflect true operating costs.

Contrary to popular belief, the design and installation of a computerized system to perform a given function is anything but a mechanical process. However, too many people still imagine that it is a simple, straightforward process to flow-chart an operation, write a program, and start running. Once a logically correct program has been written, it is true that its execution will be mechanical--if no equipment malfunction occurs. To be logically perfect, the programs's intellectual design must account for every conceivable detail and alternative in the function being automated. This degree of perfection is hardly ever achieved the

first time because of our lack of precise knowledge about our operations; it is here where we are confronted (rather brutally and expensively) by the conceptual error that everything there is to be known about a given library function is already known in complete detail. Thus, the design and construction of a computer program is an iterative process, not a matter of assembling parts of known dimensions or characteristics, as if putting together a kit. Programming bears a much closer resemblance to space exploration or to a large building construction project, where unanticipated problems are constantly intruding into well laid plans. This phenomenon prevails in batch programs and is especially evident where the programs must perform within a large system; there, unexpected interactions between programs are the rule rather than the exception. Thus, a great deal of trial and error and many iterations govern the creation of systems and programs.

To reiterate: No computer system can be implemented in the absence of a series of systematic prescriptions resolving in the minutest detail all possible alternatives for all possible actions associated with a given application. The designers must have an exact picture in advance of the extent to which these minutiae must be described, documented, and incorporated into a design before a single program can be written. Popular misconception still talks about "What the computer will do," whereas the programmer knows the computer will insistently and stubbornly do only the things it has been instructed to do. Today's computing engines working in a production environment are simply mindless golems or robots utterly incapable of judgment; they require completely unambiguous instructions. Among programmers, the man-machine gulf is deep enough that every programmer wishes for an imaginary command or instruction for his computer: "Do what I mean, not what I said!" These remarks are not meant in disrespect of the research being conducted in artificial intelligence, simulation of the nervous system, and other advanced projects. The goals of those research projects are thousands, perhaps tens of thousands, of man-years away. Computers in a workaday, production environment must still be told everything or they will do nothing.

7. TRANSFERABILITY

Since the inception of the computer era, transferability of software and system design has been a recurrent hope and theme. Theoretically, a program once written to perform a specific function would not need to be written a second time by a second user. This hope has been dashed by four factors:

(1) Scale of system complexity: the larger and more complex the system the more likely is it to have components that interact with the

total system on that machine. There are relatively few problems with the transfer of single-purpose batch programs or program modules, but even here, if data are to be processed by the transferred programs, it is essential that the source data be identically formatted and flagged. For this purpose, a translation program may be required. If there is much complexity to the data, less programming effort may be required to start from scratch. (In actual fact, the last statement may not be true, but the programmer will have to be convinced.)

(2) Machine incompatibilities exist from one computer manufacturer to another, and even within the same vendor's line of equipment; there is a lack of "upward compatibility," a widely heralded feature which did not prove out in practice. Engineering changes made to new machine, if not incorporated into those already in the field, introduce incompatibilities within the same model of the same maker's computer.

(3) A third deterrent to ready transferability is local alteration of the machine operating system and other system software, including use of different releases of compilers and languages. Changes in these "executive" programs which run the computer or compile programs can often make application programs inoperative. When system software is customized, subsystems no longer function as interchangeable parts on physically identical machines. It becomes a bit like trying to fit the door of a Chevrolet onto the body of a Plymouth; it can be done, but it isn't worth the effort.

(4) The fourth source of difficulty for transference of designs and programs lies in the fact that library X rarely wants to do exactly what library Y wants to do. As long as we insist upon tailoring the bibliographic record to a real or imagined special, local need, there is little likelihood that the programs which process MARC tapes at one installation can process them elsewhere. Only the acceptance without change of a centrally produced bibliographic record and the abandonment of customizing data to local requirements will enable system designers to begin thinking about one software package to work for many customers. I have maintained elsewhere that bibliographic data from a central source should be accepted as is, even if wrong, on the ground that standardized data with a few mistakes are better than the expense of everyone's examination of the data and the introduction of inconsistent changes, and possibly, new errors--not to mention the enormous duplication of energy and funds.

8. ACCESS TO MACHINE-READABLE FILES

The structural complexity of bibliographic records and the semantic ambiguities associated with them greatly complicate the access task wherever

there is no direct human intervention. How, for instance, would a machine system distinguish the nearly 45,000 "London" entries in the Library of Congress's Official Catalog? Even though these subtle intellectual problems have not yet been solved, experimental on-line systems have demonstrated great power to retrieve references with far greater speed and much more flexibility than is afforded by manual systems. But we lack long-term experience with many users employing a large data base. Further, the dependability of on-line files for bibliographic applications has yet to be demonstrated in a production environment, though I am reliably informed that the intellectual problems of file reliability and security may be near solution in several different commercial and military applications. The cost of maintaining in machine-readable form large files subject to immediate on-line access is prohibitive right now but could be within reach for technical processing applications of large libraries or groups of libraries, if economic and technical solutions can be found for networking problems. (Costs of file maintenance for large manual files in large libraries should be monitored continuously to see if a breakeven point is nearing which could justify selective change to machine-readable files with reasonable prospects of near-term payoff.)

Yet, why keep available on-line very large files where the probability of access to a given item is exceedingly small? We know little about how users access bibliographic information from printed media and still less about how they might extract data from other kinds of files. Considerable prior experimentation with large, machine-readable files is necessary if we are to know how to organize those files. Even so, use of the files after a period of time might very well result in a continuously changing file structure, which, ideally, should be transparent to the user, i.e., not apparent and meaningful only to the systems programmers. In the future we probably need to be prepared for partitioned files with different technical designs and differing echelons of accessibility, ranging from printed media through on-line indexes and computer-output-microfilm (COM) files. Partitioned files might range from on-line indexes, through off-line book catalogs, special chronological or subject files, and COM catalogs reissued yearly with current updates available from small on-line files. This variety of products and services can only be envisaged because of the richness of the MARC II format, which affords great selectivity of data elements for the user. By selective omissions, we can conceive of a graded series of files whose complexity and access time are inversely related, with appropriate cost trade-offs. New ideas for file organization and access are badly needed; all will have to be tested for economic and technical practicality and user acceptance.

The cheapest method of accessing a static, little-used file is via a printed medium. Interest in on-line library files has undoubtedly been stimulated by successful commercial applications, some of which parallel library uses. Airline and hotel reservation systems are good examples of

successful on-line applications and rapid file accessibility. Both deal with an extremely perishable commodity. The same is true of industrial parts lists and inventory control systems, where orders and cash flow are the controlled items. How perishable is bibliographic information? A fairly good case can surely be made for the perishability of technical processing or circulation data, which by definition are high activity, "update-intensive" files. The case is likely to be somewhat weaker right now for low activity files. How much is the user willing to pay for immediate access to a file? Suppose one can satisfy 85% of the over-the-counter circulation queries by means of a batch system with 24 hour turnaround, as is the case at Columbia University? What would be the value of a more sophisticated system which might reduce turnaround to an hour? To a minute? Suppose it costs twice as much to reduce turnaround to an hour? Five times as much to cut it to a few seconds? Is this what you, as manager, really want to do? If automation is to be cost-effective, the resource must be appropriately matched to the task at hand.

But in this connection it is well to keep in mind the rapid development characteristic of computer technology. Fast-response, large capacity storage devices may be available sooner than one imagines. What looks impossibly expensive or beyond reach today can easily become tomorrow's necessity. Continuous contact with technical developments is an indispensable part of the system librarian's responsibility.

9. COMMUNICATION AND DOCUMENTATION

Without proper documentation, a job is not finished, and the systems analysis work, design, and programming are useless. There are five purposes to documentation:

> To make progress visible to one's sponsor.
>
> To communicate one's intellectual product in the absence of its creators.
>
> To communicate designs--for staff knowledge and participation--from the moment of conception through all formal design steps terminating in completely coded, working programs.
>
> To record the reasons for specific logical decisions and design features so that the originator does not have to depend upon memory in the course of revising or debugging designs and programs.

To communicate project results to the outside world, especially to satisfy reporting requirements under a grant or contract.

Documentation does not fall out automatically as a by-product of a system development effort; it requires rigorous discipline. Unfortunately, there is nothing inherently romantic or fascinating about report writing or documenting; it's a burden. The provision of adequate documentation requires first a person who can write in clear, articulate English and who understands both computers and libraries. These people are expensive. A project with a staff of five professionals should at least consider having a full-time editor to relieve the principal investigator of extensive report writing. If the professional staff is ten or more, an editor is indispensable. It goes without saying that a good editor will see that goals, objectives, and achievements are phrased without raising the public's expectations beyond the state of the art.

Because development activity is relatively new to librarianship, it is important to publish information on the complete range of experience in library automation, from dismal failures to brilliant successes; reports on problems may be more informative than accounts of success.

10. NATIONAL GOALS AND PRIORITIES

Institutional uniqueness is a characteristic of current library automation activity. Each library appears to be going its own way, applying automation in much the same fashion as it applies conventional methodology. There is little agreement on what to do, in what sequence it should be done, and how and who should do it. In short, we lack a national plan for dealing with the intellectual and managerial problems of library automation efforts. Our current endeavors--save for establishment of the MARC II standard format--are as fragmented as the manual systems they are intended to replace. Do we want to create a series of incompatible, local efforts? How can we resolve the inevitable conflicts of interest among institutions of differing sizes, budgets, and academic programs represented within a given group?

My colleague, Joseph Becker, suggests that some form of "social engineering" is needed to make it easier for large research libraries to contract among themselves major systems development. Of course, such a suggestion implies a far greater commitment to standardization than the library community has evidenced to date. It must be remembered that fundamentally libraries are in the communication business. Efficient communication is completely dependent upon standardization--a fact that is being focused by the machine's intolerance for ambiguity. The nation's vast electric power grid and telecommunication network could not exist

without standards. Non-human processes cannot function without them. When we leave our oldest and traditional "software"--natural language and the written word--to take up the electronic impulse, we enter a world of unforgiving, impersonal rigor. To make the change successfully, it is doubtful that we can continue to go our separate ways as we have so expensively done with cataloging and classification.

We have given up self-sufficiency in collection building; will we give up some local autonomy in technical processing to benefit from the economies of standardization? My fear is that if we do not, we shall have fewer and fewer resources remaining for service to our clientele. This is a special hazard as libraries--especially in private institutions--enter a period of increased budget visibility. Our resources for understanding and applying the new technology are scarce. In measuring our success, perhaps we have done no worse than anyone else, but we are not as rich as some who can afford to recover from errors of judgment. By some means, the desired and needed national goals and priorities must be identified; if we do not do it, it may be done for us. Neither we nor our users may care for the results.

CONCLUSION

Librarians have succeeded in demonstrating that a variety of library technical processing and public service operations can be computer aided. Significant accomplishments have occurred with relatively modest investments. Though few institutions can yet directly utilize anyone else's efforts, in this respect we are probably no different from the computer world at large. Both worlds may be suffering from lack of a national plan. These national policy issues--standards, program priorities, the kinds and degrees of bibliographic access, and some concerted attack on the economic problems surrounding computer applications--still await solution. It is my conviction that the solution of these problems is essential in order that research libraries may be able to service the present and future requirements of their users. The full scope of the problems of library automation is just beginning to be realized. Now is the time to marshall the country's best brains and resources in response to the recommendations of the National Advisory Commission on Libraries. We are beginning to define the problem; that is significant progress.

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In expanding upon the contents of his paper, Mr. Veaner suggested that two important journal articles should be added to his bibliography. The first is: J. D. Aron, "Information Systems in Perspective," Computing Surveys 1: (December 1969), 213-236. The second: Fred L. Bellomy, "Management Planning for Library Systems Development," Journal of Library Automation 2: (December 1969), 187-217.

Mr. Veaner pointed out that the computer has "finally reached infancy after many years of lusty existence." Real growth in the application of computer technology has been possible only since third generation computers have become available.

In order to take advantage of computer capabilities in libraries, Mr. Veaner stated that librarians, especially catalogers, must cease to be terrified of making a mistake. Their penchant for perfection must not prevent necessary experimentation, which always carries with it the chance of error.

Discussion: Mr. Skipper opened the discussion of Mr. Veaner's remarks by introducing Mr. Paul Fasana and Mr. Charles Payne, both of whom would respond, along with Mr. Veaner, to questions from the floor. Mr. Fasana is assistant to the director of libraries for library automation, Columbia University Libraries, and Mr. Payne is systems development librarian at the University of Chicago Library.

Mr. Budington (John Crerar) pointed out that those libraries which are attempting to use computers in library operations are involved in a great deal of duplicative effort. He inquired as to the prospects of transferability of software and systems programs. Mr. Payne replied that this has not been accomplished either in libraries or other types of institutions. As pointed out in Mr. Veaner's paper, this lack of transferability is caused by a number of factors, such as system complexity, machine incompatabilities, local alteration of machine systems and system software, and variations among libraries as to what they wish to accomplish. Mr. Fasana stated that since different institutions are analyzing the same problems, they should seek transferability of design components rather than transferability of overall design. There is no doubt that the complexity of library operations has been underestimated by systems development organizations not acquainted with them.

Mr. Kaser (Cornell) commented that one approach to transferability might be that now being followed by the Five Associated University Libraries. These five institutions transferred the job of analyzing those library operations amenable to computer assistance to a research team representing the five libraries. Its task is to design common systems.

Mr. Orne (North Carolina), the representative of the ARL to the Z-39 Committee, was emphatic in stating that there will be no transferability of systems unless there is standardization of input. This standardization will come about only through the work of the various committees of the American National Standards Institute, which are working to develop standards for the data which ultimately will form the body of input to computers. He expressed concern that he was the only ARL representative working with these standards committees and recommended that the Association should involve itself in their work on a broader and deeper scale.

Mr. Rogers (Yale) said that the successful application of computers to library operations is constrained by the fact that a university library is operating within a larger university system. As a consequence, librarians often do not have the freedom to move ahead as quickly as they would like to, because of both political and budgetary restraints. Mr. Veaner agreed and stated further that one of the impediments to the use of computers in libraries is that library service must be available on demand. A good many library activities are not susceptible to computer batch operations.

Mr. Berthel (Johns Hopkins) observed that there is an analogy between the technical and political problems faced by librarians in this matter and those faced by directors of university computer centers. He suggested that it might be valuable to have several directors of these centers present at a future ARL meeting in order to discuss common problems.

Mr. Skipper thanked Mr. Veaner for his remarks, and Mr. Fasana and Mr. Payne for participating in the discussion.

Mr. Bryant adjourned the first portion of the meeting at 12:00 noon.

President Bryant reconvened the meeting at 1:30 p.m.

Mr. Bryant noted that during the last several years there has been an increasing amount of debate on the subject of the role library staff members should play in the administrative decision-making process within libraries. It is clear that librarians have joined the growing number of professional groups which are demanding some form of "self-determination." As a result, some libraries have seen their professional staffs unionized, while in others new staff associations have been formed and existing ones have displayed more vigor. Mr. Bryant pointed out that it may not be possible to predict with any precision the exact changes in library administration which these new activities presage but there is little doubt that changes there will be. The board of directors of the Association has been aware of the mounting interest in this subject on the part of ARL representatives who often have the responsibility of trying to guide this professional revolution into effective channels.

As a result of this interest, the board decided to invite Professor Stanley Seashore, professor of psychology and assistant director, Institute for Social Research, University of Michigan, to make a presentation to the membership on staff participation in management. Professor Seashore's expertise in this field is nationally recognized. He and his colleagues at the Institute have done significant research on this subject and have published extensively.

Before presenting Professor Seashore, Mr. Bryant explained that following the Professor's remarks a five-member panel would react both to the presentation and to the situation in general. Members of the panel were: Anthony Greco, Jr., assistant university librarian, University of California, Los Angeles; Andrew J. Eaton, director of libraries, Washington University, St. Louis; David Kaser, director of libraries, Cornell University; Maurice Marchant, assistant professor, Department of Library Science, Brigham Young University; and Rutherford D. Rogers, university librarian, Yale University.

Professor Seashore's comments were based on the summary which follows of themes from "Staff Participation in Management."

MAIN THEMES FROM

"STAFF PARTICIPATION IN MANAGEMENT"

Stanley E. Seashore
The University of Michigan

The theme of "participation" is reflected in the slogans of our changing times and is deeply embedded in our social history. We have long advocated democratic participation in government, not only through electoral processes but also through insistence upon open channels of communication on public issues and open means of influencing the actions of elected officials. At home you have no doubt felt the force of youthful autonomy and the non-negotiable demand to have a say in major family decisions. On the campus, the call is for student power, "...an effective voice in decisions that affect our lives and our futures." Among organization managers, there is a rich array of slogans: "decentralization," "bottom-up management," "multiple management," "the business team concept," "industrial democracy," "management by overlapping committees," "free form organization," "participative management," and the like. What these slogans have in common is the idea that higher-level managers express their willingness, indeed their need, to be influenced by lower-level people. These slogans were not dreamed up by longhair academics or rebellious youths, but by sober and responsible managers seeking better ways to get their managerial jobs done.

The pressures toward participative management arise not from transient and superficial sources but from basic changes in our conditions of life. Unemployment is no longer for your people the only alternative to passive acceptance of prescribed working conditions. Mass education has created enlarged resources of leadership potential. The pace of technological change and the demand for accommodation to a rapidly changing environment make it quite impossible, in many lines of work, to manage the enterprise wholly from the top. Many argue that managers no longer have a choice about "going participative"; it is only a question of when, how far, and in what style.

To promote analysis and debate, these remarks will take a frankly advocating view, even though there are reservations and objections that do merit consideration.

Research Evidence

A great amount of research has been done in the last two decades on participative strategies in management. That done by my own institute is

representative. Our approach has relied primarily upon field studies, comparing organizations that differ in their effectiveness, and in their degree or forms of staff participation. The aim has been to develop a set of concepts with an associated language and measurement technology for comparing organizations, to work toward some coherent and inclusive theories to account for the conditions that are found, and to interpret the results in terms of social values and in terms of action choices of managers. This work has included studies in many kinds of organizations: transportation, public utilities, government, schools, local political groups, factories, business firms, etc. (Unfortunately, not yet in libraries).

An example of such a study is one in which we made a detailed comparison of the policies, organizational structures and managerial strategies of a number of high performance sales agencies in comparison with a similar number of low performance agencies. Information was obtained by interviews, observations, and survey questionnaires completed by all members of these agencies. Sample results: High performance agencies held more staff meetings; these meetings were more concerned with policy and program planning; more of the day-to-day work was done by members working in groups rather than individually; certain managerial functions were explicitly delegated to subordinate groups; and non-managerial members reported that they had a lot of influence upon the action decisions, business policies and day-to-day work in their agency. The members were more satisfied and they earned more income. These results can be interpreted to reflect a more developed degree of staff participation in the high performance agencies than in the low.

Although the research evidence, in my opinion, strongly supports the proposition that participative practices aid both organizational performance and member satisfaction, the evidence is not entirely uniform in this respect. There are circumstances in which participative practices are irrelevant or harmful, and instances in which they are incompetently applied.

The Participative Syndrome

A number of people have attempted to reduce to theoretical propositions a conception of a syndrome of characteristics of participative organizations. These formulations vary in detail but tend to be compatible in the main. Commonly accepted features include:

- A relatively higher rate of communication among staff and enlargement of the range of matters considered appropriate for open communication.

- A relatively greater total amount of mutual influence (power, control) among members and particularly more influence among members of lower rank.

- A relatively greater amount of activity conducted in the framework of stable groups linked to the work processes and to the decision-making apparatus.

- A higher rate of interaction among members, particularly across status and functional lines.

- Joint and continuous goal-setting and goal review processes at all levels of the organization.

- A relatively high level of mutual confidence and trust, supported by relatively open discussion of values and feelings.

- Formal procedures and policies that sustain the foregoing pattern of activity.

Some theorists and social philosophers see the participative style of organizational life to be a powerful social invention that permits effective human collaboration in the face of a progressive tendency toward failure of organizations based exclusively upon tradition or on work technology.

Theoretical Foundations

There exist sound theoretical foundations for the participative model of organizational life, and these are found at the levels of psychology, of social psychology, and sociology. Some examples will make the point.

The human responses to a situation of constraint, coupled with an inability to understand and to influence the environmental factors causing the constraint, include fear, attack, and attempts to escape. In the work situation, the common responses are alienation, minimal work performance, resistance to change, and the like. Of course, people can be taught to accept constraints, and many are unavoidable, but the cost is high especially in a period of rapid social and technological change.

At the social-psychological level, a leading line of theory development concerns the dynamics of group functioning. It is posited that there is a basic need in people for stable and intimate affiliations of the kind provided by work groups. Individuals who have membership in cohesive work groups tend to be more effective, healthier, and more creative. The relevance of this to participative styles of organization life lies in the fact that it is largely through group processes that the participative syndrome can be achieved.

At the sociological level, a relevant theory is that concerned with the sources of power and its optimum distribution in formal organizations. Contemporary theory argues against two common misconceptions: (1) That the amount of power in a formal organization is a fixed amount such that if a manager "gives" some to people at lower echelons he then has less for himself; (2) That the dispersion of power throughout an organization renders the power ineffective and uncoordinated. Thus it appears as a paradox to many managers that, as the theory holds, his power is enhanced by the exposure of himself to influence from others and that the dispersion of power is a necessary condition for achieving coordination in an organization under conditions of change.

There is nothing so practical as a good theory. The above theoretical propositions are sound ones, judging both from basic laboratory research and from the practices of highly effective managers.

Reservations, Warnings

A manager undertaking to change his organizational style towards increasing participation by staff must take into account a number of costs and risks. The main ones are: 1) Not all people value participative practices and not all see the potential practical benefits, so there will be resistance and disturbance to some degree; 2) Few people have had a chance to acquire the skills of participation to the needed degree, and an extended period of training and individual development may be required during the transition; 3) Most organizations have established features of structure and policy as well as institutional custom that are counter to participative practices and these need to be changed; 4) There are some organizations that rest upon fixed technological commitments that make participative practices less advantageous and less feasible.

A further restraint lies in the personal values and anxieties of the top managers themselves. It is for most managers a highly threatening, disturbing, and demanding exercise to undertake to change the technology of their own personal work. The appeal of conservatism, tradition, and past personal success within non-participative systems is very strong. The inclination is to wait for the emergence of serious trouble, organizational failure, employee demands, before action is taken.

Practical Steps

Movement towards a participative style often can be made over time in a gradual, relatively risk-free manner. Common early steps include: 1) Increasing the frequency of use of committees, task-groups, and the like, with membership including lower-rank people, for the preparation of proposals for

technological, policy and program changes; 2) Inclusion of representatives of lower rank in certain executive and administrative bodies; 3) Training of managers and supervisors in group-oriented leadership techniques; 4) Enlarging the scope of communication to staff on issues facing the organization, and increasing the lead time of such communication before final decisions are taken.

* * * * *

Professor Seashore elaborated upon the major points in his summary as they relate to staff participation in the management of research libraries. He pointed out that the demand on the part of librarians for a voice in the decision-making process is part of a "quiet revolution" which can be seen in many aspects of American life. Major changes have been and will continue to be made in the traditional hierarchical, authoritarian pattern of management. On the whole, these changes should be welcomed since they should improve institutional management and this improvement should result in greater efficiency and service. However, administrators must prepare for staff participation by embarking upon a well conceived program of training for those individuals who are recognized as future managers. Other preparatory steps include increasing the frequency with which major management issues are dealt with openly by individuals in the lower ranks of the institution, especially by those who will be directly affected by the decisions in question. Further, every opportunity should be taken by the administrator to communicate as a matter of routine with more people about more things. Staff members should be kept abreast of the important matters which are under consideration by management and management should so structure this communication as to allow "feedback" from staff members. Professor Seashore stated that the more "lead time" there is prior to a rather full participation in management by staff, the greater will be the chances of acceptance and success.

Professor Seashore warned that management must realize that some people want no part of participative management. His studies have shown that from ten to thirty percent of a given organization's staff have reservations about their having more to say about the organization, itself. It must also be recognized that few people have had the opportunity to participate in, and therefore learn about, management processes and techniques. Staff will have to be trained both formally and informally to accept this responsibility so as to produce the desired results.

A very important aspect of this new participative management syndrome is that every task within an organization must be seen by staff and administration alike as an educational process. Every job undertaken involves an initial learning process which precedes productivity. Within this context, a good many traditional job descriptions which focus on the activity and its product become outmoded.

Professor Seashore commented that some organizations cannot develop participative management to any great extent because of inherent technological or economic considerations. He thought, however, that a research library does not have the characteristics which would preclude the development of staff participation in management, and that they should actively encourage this type of management organization.

Members of the panel then responded to Mr. Seashore's remarks. Mr. Greco stressed the importance of a "total approach" to participative management. This means involving the whole staff and the setting up of a formal advisory organization to the library administration. Forming a committee to study only one problem is unreasonable, because in a library one problem is usually related to many. He also thought it important that library staff members realize that final decisions must be made "at the top." It is a serious misrepresentation to lead people to believe that they are making the final decisions when in fact they are not and cannot.

Mr. Eaton was in agreement that more staff participation in library administration is desirable. He agreed that until now library administrators have paid little attention to new management techniques but they must do so in the future, since the decision-making role of staff is going to increase if only because of staff pressure. Mr. Eaton stated that library administrators must be aware of the problems involved in the participative mode. They include the following: 1) Not everyone wishes to participate; 2) management skills have not been developed among a large part of the staff; 3) participative management involves numerous meetings, which tend to slow the decision-making process; 4) there is a danger in developing this new procedure too rapidly, which will result in misunderstanding and attendant morale problems; and 5) participative management will result in increased costs to libraries, because participants will have to reduce the amount of time now given to their routine tasks. Mr. Eaton went on to say that while participative management is good it must not be seen as a panacea for all library problems. The key to its success is the quality of people involved. Staff participation in management will be just as effective as the intelligence and dedication of the individuals involved allow it to be.

Mr. Kaser pointed out that the basic reason for the introduction of participative management into libraries is to allow the administration to properly utilize the talents and opinions of the staff, which otherwise are not available to it in the decision-making process. Too often, the hierarchical organization of libraries does not allow administrators to have access to the management data necessary to effective decision-making. This situation is caused by the lack of "feedback" from staff members on important library matters. The opinions of the staff must be actively sought out by top administration if decisions are to be both acceptable and effective. Mr. Kaser had no doubt that well thought out participative management will strengthen an organization. This depends in large measure on the participation of those staff members who have much to contribute.

Mr. Marchant, who is making a study which attempts to measure by quantitative procedures the effect of participative management on a variety of performance measurements in university libraries, stated that the present character of library administration is partly a result of the accidental meeting of the needs of library organization during its formative years and the beginnings of the classical theory of management. Libraries recognized the strengths of this theory and utilized them. However, since we now know a great deal about effective managerial procedures, it is unwise to continue to use those "as out-dated, inefficient and exploitive" as those found in classical bureaucracy. Mr. Marchant answers the complaint that the "new breed" of librarians doesn't produce the quantity and quality of work as that produced by past generations of librarians by stating that the problem is one of motivation, not of ability. One of the primary functions of library administrators today is to provide motivation, since younger librarians cannot be simply driven to perform effectively as they do not consider themselves "simply for sale."

Although Mr. Marchant has not completed the analysis of the data involved in his study, some interesting preliminary findings have been indicated. For example, the correlations between extent of professional library participation in decision-making and the performance measurements are generally as predicted. Secondly, whereas classical management theory would predict a higher correlation between overall staff satisfaction and such rewards as opportunity for salary increases and promotion, his study indicates that the highest relationships are the result of opportunities for professional growth and promotion, and currently assigned duties. Salary increases do not rank high as a factor in staff satisfaction. Further, there appears to be a tendency among top management to "want the motivational qualities which result from participative management without being willing to structure the process by which they can be developed." Mr. Marchant concluded by observing that the relative lack of acceptance by library staff members of stated library goals results from the excessive bureaucratic procedures involved in the decision-making process.

Mr. Rogers was of the opinion that there is more participative management in libraries than is generally admitted. Effective library administrators always have involved staff members in the decision-making process to a very large extent. He pointed out, however, that there are aspects of library administration which will not admit of full implementation of the theory of participative management. For example, libraries operate within some very rigid constraints, such as the use of the Anglo-American code and the Library of Congress subject headings. Activities such as these cannot be subject to majority vote. It also must be realized that a research library is a system with each activity having a direct bearing on other activities. One must be cautious in tampering with one element of the system because of the possible deleterious effect on the system as a whole. Mr. Rogers pointed out that his long experience clearly indicates that some

groups of individuals are simply not suited for effective participation in management.

Professor Seashore responded to this last point by saying that it is not necessary to compel everyone in an organization to participate in management or to participate in exactly the same way. Ultimately, it must be the choice of the individual as to whether or not he will participate and to what extent. Studies of this type of organizational structure indicate that the persons who have an interest in managerial positions and gravitate to them tend to have the needed managerial characteristics.

Discussion: Mr. Jackson (Pennsylvania State) stated from the floor that librarians will learn to use participative management techniques through a process of trial and error. They will find that this type of organization will become a comfortable situation with very tangible benefits to library management. It should, for example, alleviate the disenchantment of professional staff with the drudgery of certain routine tasks. Also, participative management can overcome the tendency on the part of staff members to simply "tell the boss what he wants to hear." There should be a more honest and, subsequently, more useful dialogue between administration and staff as a result. Mr. Jackson also said that the implementation of participative management procedures in university research libraries coincides with the increasing demand for full faculty status on the part of librarians. If librarians are to have academic status, not only will they no longer have rigidly set working hours, but they will participate in decision-making in the same professional manner as do their professorial colleagues.

In answer to a question from Mr. Skipper (California, Berkeley), Professor Seashore stated that the unionization of librarians may result from the conviction that a formal union is the only method available to them for guaranteed participation. Unionization may not result if effective participation can be brought about before staff members become totally discouraged.

Dr. Cummings (National Library of Medicine) concluded the discussion by saying that he felt that participative management in full measure could result in poor library administration. We may be asking ourselves in the future how to return the management of a library to the director. He pointed out that the conclusions that were drawn by Professor Seashore on the effectiveness of participative management resulted from experiences in industrial and commercial organizations. These experiences do not necessarily apply to research libraries.

Mr. Bryant thanked Professor Seashore and the members of the panel for their contributions to the program. He then informed the membership there would be a short coffee break, after which the business portion of the meeting would be convened.

BUSINESS MEETING

President Bryant reconvened the meeting at 4:10 p.m.

Warren Haas, chairman of the Nominating Committee, noted that in accordance with the bylaws of the Association, the membership had been sent the slate of five candidates who had agreed to stand for election to the ARL board of directors. The candidates were:

William Budington (John Crerar)
Stuart Forth (Kentucky)
Herman Fussler (Chicago)
W. Carl Jackson (Pennsylvania State)
Basil Stuart-Stubbs (British Columbia)

Mr. Haas reminded the representatives that they should vote for no more than three of the five candidates.

Mr. Bryant then asked if there were additional nominations from the floor. Since there were none, he directed that ballots be distributed and appointed Rutherford Rogers and Benjamin Powell as the official tellers for the election.

Mr. Bryant noted that discussion of the report of the Copyright Committee would be deferred until the following day.

President's Report

Mr. Bryant observed that on this its thirty-eighth anniversary the Association was a quite different organization from the small group which launched the whole enterprise in December of 1932. The membership now numbers 85 libraries and, more significant than the growth in size of the organization, the ARL has undertaken direct responsibility for the administration of projects and studies which deal with some of the more important problems facing research libraries. In this new role, it has been necessary to develop a staff which now totals eighteen full-time members.

Mr. Bryant then recounted some of the recent activities of the Association.

1. The Slavic Bibliographic and Documentation Center came into being in the summer of 1969, supported by a three-year grant from the Ford Foundation. It actually began its operations on October 1, when Mr. E. Alex Baer assumed his duties as director of the Center.

2. The Association agreed to administer the National Serials Pilot Project for a period of one year with a grant from the National Agricultural Library. Mr. Donald Johnson was recruited to direct the Project and he assumed his responsibilities in September.

3. With the financial support of the Council on Library Resources, the University Library Management Study was begun, under the auspices of

both the Association and the American Council on Education. The firm of Booz, Allen and Hamilton was engaged to perform the research. A joint advisory committee, consisting of representatives from the ARL and the ACE, has guided the study and has contributed invaluable advice to the study team. The final report of the study should be available to the membership no later than April 1970.

4. The Microform Technology Project was continued under a second contract with the Office of Education. This phase of the Project will establish guidelines for the more important environmental factors necessary to the effective use of microforms in libraries, and also will attempt to develop a system of bibliographic control of microforms. Donald Holmes remains as project director and also serves as principal investigator for the environmental aspect of the Project. Felix Reichmann, of Cornell University Libraries, is the principal investigator of the bibliographic control study. Miss Josephine Tharpe, also of Cornell University Libraries, is the assistant principal investigator.

5. Ralph Ellsworth completed his research on and the manuscript of his study of economics of book storage and the Association arranged for its publication with Scarecrow Press. The book was published in December 1969, under the title, The Economics of Book Storage, and the ARL office distributed two copies to each of the member libraries. A grant from Educational Facilities Laboratories supported this study.

6. Keyes Metcalf, working with a grant from the Council on Library Resources, completed his work on the study of library lighting. His draft manuscript is now being edited.

7. Robert Downs, chairman of the ARL/ACRL Joint Committee on University Library Standards, finished a truly astonishing task of gathering important statistical data from the nation's leading research libraries, with the objective of indicating those factors necessary to the development of outstanding libraries. With the assistance of Mr. John Heussman, this material was organized and sent to the ARL office, which had it reproduced under the title, University Library Statistics. Distribution to the membership was accomplished and there has been a considerable demand for this publication by interested individuals and organizations.

8. Work has gone forward on the study to determine the elements of a national plan for the microfilming of foreign newspapers. John Lorenz chairs the committee which is guiding the study. The research is being done by Mr. Norman Shaffer, formerly of the Library of Congress and now of the University of Nebraska Libraries.

9. The Center for Chinese Research Materials, under the direction of Mr. P. K. Yu, has made significant strides in developing its program of acquiring, reprinting and distributing scarce research materials on contemporary China in the Chinese language. The titles made available have been well received and the staff of the Center is now engaged in bibliographic projects which should provide useful guides to several of the titles which the Center has reprinted.

Mr. Bryant stated that although the accomplishments of the Association are more than satisfying much remains to be done. It was his conviction that the ARL must address itself just as quickly as possible to several immediate problems facing the membership. Among these are the following:

1. The Association must actively seek to broaden the opportunities for minority groups in research libraries. To this end, a subcommittee of the board will be appointed which will consult with the membership and will develop a set of recommendations for consideration by the board and the Association.

2. The ARL must determine the role of the research library in making available the ever increasing amounts of information contained in computer-based data banks. The summary tapes, which will result from the 1970 Census, are an example of this type of information. Methods of providing access to these materials for the scholarly community are of prime concern to the Association.

3. Solutions must be found to the management problems now confronting research libraries. New approaches are definitely needed if the necessary services to the scholarly community are to be maintained and improved.

4. The Association must pay careful attention to the possible impact on research libraries of the increasing emphasis on interinstitutional cooperation in collection development.

Mr. Bryant concluded his report by congratulating the executive director on the amount and quality of work which the ARL office accomplished during the preceding twelve months.

Executive Director's Report

The executive director expressed his appreciation for the assistance which he had received during the past year from the ARL committees and especially from Mr. Bryant. He admitted that the ARL office had made significant demands upon the time of the ARL representatives in asking them to contact their Congressmen regarding legislation relevant to research libraries, especially that dealing with appropriations for parts A, B and C of Title II of the Higher Education Act and with copyright revision. He assured the membership that these contacts have been fruitful and that, as a result, members of Congress have a new awareness of the needs of the research library community. He warned the representatives that the office will continue to call upon them for their active support in this area.

The executive director acknowledged the rapid growth of the ARL office staff and thanked the membership for the many suggestions he had received regarding candidates for new positions.

Although the formal reports covering the activities of the Chinese and Slavic Centers and the National Serials Pilot Project had been distributed in advance of the meeting, there has been additional progress in each of these areas since the reports were prepared and submitted. Particularly important is the work of the National Serials Pilot Project which has

begun to move along at a more rapid rate. The advisory committee to the Project, chaired by William Budington, has had two excellent meetings which have resulted in the development of effective guidelines for the Project. Mr. McCarthy reviewed some of the recent decisions which have been made regarding the "critical path" which the Project will take in developing a checklist of scientific and technical serials and some of the subsequent activity. He emphasized that the project now has its parameters clearly in mind and that useful results should be forthcoming by the end of this first phase. Mr. Johnson is benefiting from his past experience with computer techniques and from his constant contact with representatives and the staffs of the three national libraries.

A great deal of time during the past year was devoted to federal relations, especially with respect to copyright revision. Numerous meetings were held with Verner Clapp, chairman of the ARL Copyright Committee, and Philip Brown, legal counsel to the ARL, to work out a responsible and effective position for the Association on this most important matter. The ARL group worked closely with representatives of the ALA, Mr. Low and Mr. North, in order to present a unified position to the Senators and their staffs. Although the present version of the revision bill presents serious difficulties for the photocopying activities of research libraries, the executive director reported that he was still hopeful that the necessary changes can be effected before the bill is passed.

The Association also has been actively involved in expressing the needs of libraries to the Federal Government by working with the other segments of the higher education community in Washington. One very important result is that the Association has not been designated a foundation under the provisions of the Tax Reform Law. Another success with respect to this particular piece of legislation is that gifts of books and manuscripts to libraries are not subject to capital gains tax, except collections of personal papers given to a library by the owner. The legal opinion on this subject, developed by Philip Brown, will be sent to the membership.

The House-Senate Conference Committee reported an appropriations bill for the Department of Health, Education and Welfare which restored a good portion of the money for library programs which had been cut by the administration. [President Nixon's veto and subsequent developments have been reported in the press.]

Report of the Subcommittee on ARL Meetings

Mr. Buckman, subcommittee chairman, recounted for the membership the decision of the board to consider possible changes in the format and scheduling of ARL membership meetings, in order to accomplish the following purposes:

1. Attendance of a maximum number of directors of ARL libraries at each meeting.

2. Better opportunity for ARL representatives to participate in the meetings without conflict between them and ALA pre-conferences and conferences.

3. Greater participation by the ARL representatives in discussions of substantive issues.

4. More time for directors of ARL libraries to meet informally with as many colleagues as possible.

5. Closer coordination of the work and reporting of ARL committees and of other organizations and projects of interest to the ARL, with the proceedings of the full membership meetings.

6. Improved ARL program meetings with more time available for membership reactions to the topics presented.

The board appointed a subcommittee to recommend changes for the meetings and to determine the response of the membership to the proposed alternatives. In December 1969, Mr. Buckman, on behalf of the subcommittee, sent a questionnaire to the membership asking their advice on these specific recommendations:

1. The midwinter meeting of the ARL would be held at its customary time in January. It would consist of small, concurrent group meetings, of no more than twenty participants each, for a morning session preceding an afternoon business meeting. These discussion meetings would be carefully planned to focus on the issues of prime importance to members of the ARL.

2. The traditional summer meeting, held in conjunction with the ALA meeting, would be moved to a date in late April or early May of each year. It would be a two-day program and discussion meeting, and would be held at an appropriate conference site. The meeting would be carefully planned along the lines suggested by a program subcommittee.

Mr. Buckman noted that seventy completed questionnaires were returned. The responses were heavily in favor of the proposal. Some of the negative replies were very useful in shaping the final subcommittee recommendation to the board.

The board approved for presentation to the membership the meeting changes as recommended by the subcommittee, with the exception that the spring meeting would be held in a suitable city rather than at a conference site and with emphasis on the experimental nature of these changes. Mr. Buckman moved the adoption by the membership of the meeting proposal. The motion was carried unanimously.

ARL/ACRL Joint Committee on University Library Standards

Robert Downs, chairman of the joint committee, stated that the committee has been responsible for two publications: University Library Statistics, issued by the ARL office; and a summary of the data in that publication which will appear in a forthcoming issue of College and Research Libraries.

He agreed with the board of directors that the Association should continue to participate in the work of the committee. Mr. Downs noted that

the lack of unanimous support for establishing standards for university libraries is well understood, since there is no doubt that some governing bodies could look upon standards as maximum rather than minimum levels of achievement. He pointed out, however, that if librarians don't set their own standards, other agencies will do the job for them.

In the future, the committee will seek to publish additional data on professional libraries besides those for law and medicine. They also would like to perform detailed subject analyses of library holdings. In all of their efforts, the committee hopes to achieve the cooperation of learned societies and to conduct research in order to validate findings. He urged directors of ARL libraries to communicate to the joint committee any suggestions they might have regarding the work of the committee.

ALA Communications Network Conference

Mr. Haas informed the membership that the preparatory work for the ALA Communications Network Conference, sponsored by the Office of Education, was going forward. It will be held in the fall of 1970 and will last several days. Mr. Joseph Becker is in charge of the planning committee, while Mr. Russell Shank, of the Smithsonian, is head of the executive committee. Attendance will be by invitation and will be limited to 125 persons.

U.S. Book Exchange

Porter Kellam, the ARL representative to the U.S. Book Exchange, referred to his written report which was available to the membership. He stated that he had asked to comment on that report in order to point out that USBE wishes to increase its distribution of publications to ARL libraries and that ARL libraries could benefit by using USBE more extensively for acquisitions.

The USBE faces the same problem of rising prices as do other organizations. It has increased its membership and handling fees, even though these are still comparatively low. However, in order to maintain and improve its services, it must increase its distribution. Its goal for 1970 is to provide 675,000 publications to member libraries.

Mr. Kellam said that ARL libraries have supported USBE over the years by becoming members and by depositing publications. The libraries have not used USBE extensively, however, for acquisitions purposes. Mr. Kellam felt that the chief obstacle to increased use of the USBE by the membership is a lack of proper communication between the USBE and the key acquisition personnel in the libraries. He requested, therefore, that the directors of ARL libraries refer copies of his prepared report to the individuals in each library responsible for acquisition decisions. The USBE will then ask the directors of ARL libraries to send to it the names and titles of those persons for future reference. [Mr. Kellam's report appears in these Minutes as Appendix M.]

Library Dedications

Benjamin Powell announced that the dedication of the new library building at Duke University will be held on April 15-16. Invitations will be sent to the directors of ARL libraries and it was Mr. Powell's hope that all would be able to attend.

Ben Bowman added that the new library building at the University of Rochester will be dedicated during a two-day program on April 23-24 and said that invitations would be in the mail shortly. He too hoped for a large turnout of representatives.

Encyclopaedia Britannica Micropublishing Project

James Skipper reported on his negotiations with Encyclopaedia Britannica regarding the filming of volumes in the collections of the University of California Library (Berkeley) for republication in microfiche by Britannica. The first of its microform projects will be the Library of American Civilization, which will contain approximately twenty thousand titles. Britannica had requested permission to have access to the California collections, which undoubtedly contain a large number of the desired volumes. Mr. Skipper responded by setting down clearly defined procedures which would have to be followed and proposed that royalties be paid to the library for the percentage of the total volumes supplied from its collections. There was no response from Britannica to this offer.

Subsequently, the University of California Library and a large number of other research libraries throughout the country received a letter from Britannica which explained the nature of the publication program and requested permission to film volumes in the collections of the various libraries, with reimbursement to the library from Britannica set at $10.00 per volume. Mr. Skipper indicated that this mailing evidently was the only response he would receive from the representatives of the company.

While agreeing that research libraries do have an obligation to make their collections available to other parts of the academic community, Mr. Skipper felt that this project represented an exception to the usual request from microform publishers to reprint titles on a limited basis. This was a large-scale program of republication which would result in significant profits for Britannica. As such it should provide to the participating libraries a fair return on the large investment each of them had made in developing the collections. Consequently, Mr. Skipper felt that a royalty agreement was a proper basis for negotiating with Britannica.

It was agreed that the record would show that Mr. Skipper presented his remarks for information purposes only and that he was not requesting a consensus from the membership.

Academic Librarians' Salary Survey

Donald Cameron expressed his personal appreciation and that of the Council on Library Resources for the cooperation of the ARL membership in

responding to the sample questionnaire used to collect information on the salaries of academic librarians.

Mr. Cameron stated that at this time a tabulation of the results is being prepared by the same people who have been tabulating the questionnaire responses sent to Committee Z of the AAUP for the past several years. After the tabulation is completed, Mr. Cameron and Miss Peggy Heim will interpret the data. The Council on Library Resources intends to call together a small group of librarians to discuss various methods of making the report useful to librarians.

The report will not identify institutions, but the statistics supplied will be used to compile averages and to indicate trends by regional groupings and comparisons of institutions. This procedure will be the same as that employed by Committee Z in its report which appears annually in the AAUP Bulletin.

The report will be made available to the cooperating librarians and other individuals and organizations which have an interest in improving the economic situation of academic librarians.

1970 Census Tapes

Mr. Harrer (Florida) expressed the hope that the ARL office was devoting some attention to the potential problems which will be faced by research libraries in attempting to make available information in the 1970 census tapes. He pointed out that the projected cost of these tapes is very high and that the number of tapes will make their organization very difficult.

Mr. McCarthy replied that the office is concerned about this situation and is collecting as much information as possible from the Bureau of the Census. He pointed out that outside of the Bureau scholars in the social sciences are best informed about the situation. Mr. McCarthy has consulted with Dr. Henry Riecken, president of the Social Science Research Council, and a tentative plan has been agreed upon for a meeting of interested groups, including the ARL. If this meeting takes place and if it is productive, the executive director will report its results immediately to the membership.

A "Thank You" to Messrs. Eaton and McNiff

Mr. Bryant expressed the appreciation of the membership for the efforts of Mr. Eaton and Mr. McNiff who had just completed their terms as members of the ARL Board of Directors. Both Mr. Eaton and Mr. McNiff contributed significantly to the work of the board and had assumed considerable responsibility in furthering the various ARL projects.

Election Results

Mr. Bryant announced the results of the election, as certified by Mr. Rogers and Mr. Powell, to fill the three vacancies on the ARL Board. Elected to the board were: William Budington (John Crerar), Herman Fussler (Chicago),

and Basil Stuart-Stubbs (British Columbia). The terms of these newly elected board members will extend through 1972.

Adjournment

After Mr. Martin had informed the membership of the plans for departure to visit the new library at Northwestern University on Sunday morning, Mr. Bryant adjourned the meeting at 5:30 p.m. and announced that the meeting would be reconvened on Sunday, January 18, at 2:30 p.m.

VISIT TO NORTHWESTERN UNIVERSITY LIBRARY

At 8:30 a.m. on Sunday, January 18, the ARL representatives and their guests departed by bus for the campus of Northwestern University to view the new library building, which was to be opened for use on January 19.

An excellent program had been prepared for the Association visitors. Prior to the well conducted tours of this unique building, a presentation was made of the basic concepts underlying the design and layout of the library. Participating were: Professor Clarence L. Ver Steeg, chairman of the Faculty Planning and Building Committee; Professor Robert Strotz, dean of the College of Arts and Sciences; Thomas Buckman, university librarian; and Mr. Walter Netsch, design partner in the architechtural firm of Skidmore, Owings and Merrill.

After the tours, the University hosted a lunch for the visitors and presented them with folders containing excellent photographs of the building and other informative materials.

President Bryant thanked Mr. Buckman and Professor Ver Steeg for an extremely well managed visit, and expressed the appreciation of the Association to those members of the Northwestern University staff who had made it possible.

UNIVERSITY LIBRARY MANAGEMENT STUDY

President Bryant reconvened the final portion of the meeting at 2:30 p.m. He introduced Vice President Warren Haas, who presided.

Mr. Haas explained that Mr. Douglas Metz, vice president of Booz, Allen and Hamilton, would summarize the principal findings and recommendations of the management study. Following his presentation, four panelists would comment. They were: Douglas Bryant, university librarian, Harvard University; Herman Fussler, director, University of Chicago Library; John McDonald, university librarian, University of Connecticut; and Robert Vosper, university librarian, University of California, Los Angeles. Following the remarks of the panelists, there would be a coffee break, after which there would be discussion from the floor of the draft report.

Mr. Haas explained that this study of the problems involved in university library management was undertaken because of a growing concern over the increasing mismatch between library funds and capabilities on the one hand, and the expectations and demands of library users on the other. The firm of Booz, Allen and Hamilton had been employed to identify the more pressing problems, and to indicate their priorities and methods of solution. The discussion of the study during this meeting would assist Mr. Metz and his colleagues in clarifying the elements which will be included in the final report.

Before introducing Mr. Metz, Mr. Haas stated that the joint advisory committee to the study and the study team were in agreement that effective local solutions to the problems presented in the report depend upon the continued active participation in library management projects of university administrators. Further, there is no doubt that effective implementation of the studies recommended in the report will depend upon the establishment of an office of university library management studies, administered by the ARL and guided by a joint committee, such as the one which has assisted the present study. The management study office, if developed, would provide the necessary structure for the many experiments, demonstrations, workshops, projects, etc., which must be undertaken in the next three to four years. To be effective, these activities must result in useful products: procedures and specifications for a wide variety of management areas, which will be useful in the management functions of individual libraries. As Mr. Haas pointed out, management is not an end in itself; it is a means of matching library capabilities with library responsibilities.

Mr. Haas then introduced Mr. Metz, who summarized the draft report, an outline of which had been distributed to the membership.

Mr. Metz explained that this study of university library management had as its basic objective the improvement of the decision-making processes necessary to the effective use of library resources. It attempts to identify a number of approaches which librarians should utilize, individually and collectively, in order to take better advantage of increasingly scarce library resources. He then noted the principal recommendations contained in the report for the improvement of library management.

1) Planning: The study points up the general lack of effective planning in the universities visited during this study. Libraries should take the initiative in this area by developing comprehensive library program planning systems. This approach should yield stronger justifications for library budget requests. The ARL should sponsor a study to design a model for developing a planning-programming-budgeting system or method for university libraries, both for the short and long-range.

2) Management Information: At present, libraries lack the management data needed to plan and evaluate programs, and to control limited resources effectively and efficiently. Such information is necessary to the clarification of library objectives and requirements. For example, research libraries do not possess reliable cost data for most of their operations. The Association of Research Libraries, therefore, should sponsor a study to design a management information system for university libraries.

3) Improvement of University Library Operations: Research and other steps must be undertaken to improve university library operations. These steps include the codification of operating policies into manuals; the improvement of manual systems; increased emphasis on the possible applications of automatic data processing to library operations; and a close examination of library cost accounting requirements. If feasible, the ARL should sponsor studies focused on each of these problems.

4) Improved Organizational Structure: Changing library requirements, increased specialization among staff, and current and anticipated program

needs indicate that the ARL should sponsor a separate study of improved forms of university library organization.

5) Library Manpower Problems: The Association should support efforts to identify the need for qualified university library personnel. The problem of personnel should be approached on a national level. To this end, the ARL should conduct a national inventory of staff shortages and should consider establishing a clearinghouse of information on research library manpower needs, development and training.

6) Financial Support of University Libraries: There is growing evidence that university libraries will be supported in the future at less than the budgetary growth rates of the past decade or two. In order to meet this problem, the ARL, with the support of the American Council on Education, should continue to seek increased federal support of university libraries. Other third party sources should be identified and evaluated as to their potential for support of research libraries. These include foundations, the federal government, state governments, public philanthrophy, and the use of fees and royalties.

7) Interinstitutional Cooperation: Cooperation among libraries and their parent universities holds promise for providing improved bibliographic control and access to information resources external to an individual campus. The ARL and the ACE should jointly sponsor research to define new approaches to and the requirements of interinstitutional cooperation. Any consideration of interinstitutional arrangements must take into account the potential role and service capabilities of the national libraries and other organizations, such as the Center for Research Libraries. Research on this general subject must take note of anticipated reservations on the part of many faculty members. Consequently, the research will have to be carefully planned and the implementation of its results should be gradual.

Each of the panelists then commented on the draft report.

Mr. Fussler stated that research libraries have a special responsibility for providing information resources for the nation. This special responsibility will not be discharged by individual libraries using conventional means of management. The membership of the Association, however, has not reacted collectively to the more important problems which face the research libraries as they attempt to meet their obligations. It must be remembered that a single research library is only one segment of a very complex national system. Systems which are now being planned to insure access to research materials often ignore this fact.

If libraries are to close the gap between the expectations of users and the capabilities of libraries, librarians and university administrators must recognize that there is a very uneven distribution of and access to library resources throughout the nation. This problem must be attacked by a system of national planning and must attract the funds commensurate with the scope of this undertaking. The development of a strong national commission on libraries would assist the library community in solving these problems.

Mr. Fussler contended that an accurate analysis of the day-to-day availability of library resources would reveal a significant level of user frustration. This frustration will be exacerbated by continuing pressures for more materials and greater services at a time when libraries are experiencing difficulty in obtaining the funds necessary to maintain existing levels of services and collection development. He thought that the report should clearly indicate that university presidents and fiscal officers do not have sufficient understanding and appreciation of library costs. In order to gain this understanding, libraries must demonstrate they are using their resources efficiently, and must present realistic alternatives to present practices. One of the difficulties in this regard is that statistics on library operations either do not exist or are not reliable.

Mr. Vosper warned of placing undue priority on ill defined inter-institutional arrangements; there are too many library networks which have been made operational before there was a thorough understanding of both their specific functions and the amount of money needed for them to operate effectively.

Mr. Vosper agreed with the report statement that there is a serious lack of adequate management information. This hinders effective library cooperation. In this regard, he posed a number of topics which must be examined thoroughly. 1) Reliable information is needed on the unit costs of library services within research libraries before interinstitutional arrangements are entered into. 2) Measurements must be developed for the effectiveness of library services. 3) Studies should be made of "service loads" to determine the point at which interinstitutional services degrade local services. 4) A determination must be made of the reasonable division of labor among libraries working within a network. 5) There is a need to know precisely which regional library agreements are more or less effective than national agreements. 6) A study should be made of the best method of governance of interinstitutional arrangements.

Mr. Vosper went on to say that libraries have been successful in the past in developing effective, voluntary interinstitutional organizations and activities, such as the Center for Research Libraries, the U.S. Book Exchange and the Farmington Plan. It is important that research libraries determine whether or not the full potential of these existing arrangements has been reached. In addition, research libraries must find other areas in which interinstitutional procedures would be beneficial, including bibliographic access and manpower.

Mr. Bryant addressed himself to the problems of the cost of library services as outlined in the draft report. He pointed out that the report of the President's National Advisory Commission on Libraries found that the nature of library costs is such that they will continue to rise, in spite of the best efforts of librarians to prevent it. Among the factors influencing increased costs are: inflation; increasing demands for materials and services by scholars in new subject fields; the new requirement in libraries for high salaried specialists; the need for wholly new categories of research materials, such as the census tapes; and the significant costs involved in preserving deteriorating research materials.

Mr. Bryant stated that the increased size of libraries and the ever increasing use of them lead to larger unit costs. In part, this results from the fact that libraries provide services which are not salable products, and the value of these services can be measured only in very imprecise ways.

In order to slow the rate of cost rise, research libraries must rely to a larger extent on centralized collections, such as those at the Center for Research Libraries. Also, libraries will have to adopt specialization in collection development. Savings in processing costs can be obtained through further development of the Shared Cataloging Program at the Library of Congress. Further, libraries must examine very closely the possibility of increasing the application of computer technology in order to gain greater efficiency.

In addition to these devices, however, Mr. Bryant emphasized that portion of the draft report which dwells on the sources of increased funding for research libraries. The role of private philanthorphy is at present somewhat uncertain, even though there has been an enormous rise in contributions since the end of World War II. This area of support is now leveling off and there are the added uncertainties of the effect on contributions to libraries of the new Tax Reform Law. Federal support has been inconsistant in the past and is likely to become more so in the future. Significantly increased support at the state level is doubtful. Further, the educational community must always be aware of the possibility of greater control of those elements of the academic community which are funded by government agencies.

On the other hand, large foundations may be a source of increased support for research libraries, because the new Tax Reform Law prescribes that they must distribute more of their funds in any given year.

Mr. McDonald focused on the personnel problems facing research libraries. He thought that the draft report did not place proper emphasis on this aspect of library management. He pointed out that many documents delineate this problem and that there are present studies, such as the one at Rutgers University funded by the Office of Education, which are attempting to come to grips with it.

The proposed increase in interinstitutional cooperative arrangements will result in new roles for library staff. Undoubtedly, there will be a need for specialists in many fields even if research libraries continue to grow in their present manner. It is important, therefore, that research library administrators improve relations between their institutions and library educators, since to a very large extent it will be the graduate library schools which will provide the needed manpower. Mr. McDonald said that in the past this matter has not received much attention from either working librarians or library educators. A meaningful dialogue must be instituted if the library schools are to produce individuals capable of assuming responsibilities in research libraries. If this type of personnel is not available in the very near future, library service is bound to decline.

Discussion: John Humphry (New York State Library) noted that the outline of the draft report overlooks the contributions that state agencies can make in the planning process for the effective utilization of college and research library resources. If a state has, as New York does, a state office of higher education, it can play an effective planning role. The state can be an important intermediary in the building of a national system. On the other hand, Mr. Humphry noted that networks are not the whole answer. The first need is for strong local libraries, which would then be linked in regional, state and national systems.

Mr. Vosper replied that New York State is unique in its long history of direct involvement in providing library services. This is not true of other state governments, most of which have little understanding of the problem. He hoped that New York would serve as an example for the rest of the nation.

Mr. Wilsey (Booz, Allen and Hamilton) agreed that state planning is needed. He thought it undesirable for all decisions to be made at the national level. Individual libraries must first make plans for effective resource management and then develop these plans on a regional and state basis.

Mr. Humphry said that states must assume a leadership role. If they are not doing it, the impetus should come from individual libraries and consortia within the state.

Mr. Stanford (Minnesota) agreed with Mr. Vosper that there is an urgent need for a realistic study of the rapid development of ill conceived consortia. He also supported the potential value of cost-benefit studies of library activities, insofar as they would assist library administrators in defending their budgets.

Mr. Haas stated that such cost studies are recommended in the full report and that the Office of Education is embarking on a study of existing consortia.

Mr. Berthel (Johns Hopkins) stressed the need for university-wide planning before effective planning can be done in libraries. He thought one of the great difficulties faced by research libraries is the uncontrolled growth which has characterized universities recently.

Mr. Wilsey supported Mr. Berthel on the need for university-wide planning, but was not optimistic that it will be forthcoming in the near future or that it would involve libraries to any great extent. The alternative is for librarians to embark on their own planning systems and to involve the university in the process.

Mr. Rogers (Yale) thought the report says many things which have been well known for a long time. What is needed from this study is a clear indication of what needs to be done first. For example, a very important question which must be answered relates to the adequate level of book support for a given academic program. In order to determine this, librarians must have faculty involvement in studying the problem. Librarians also must educate faculty and administration in the cost of library services and in

what research librarianship is all about. Further, Mr. Rogers said that the explanation of the manpower problem contained in the report is somewhat oversimplified in that it emphasizes the need for new types of personnel in libraries, and does not take into account the fact that many effective librarians have acquired their skills by having the opportunity to gain the right kind of job experience.

Mr. Haas pointed out that the outline of the report is not complete and that some of the items mentioned as necessary to the final report actually are contained in the complete draft.

Mr. McAnally (Oklahoma) questioned whether the emphasis on granting faculty status to research librarians will lead to faculty management pratices within libraries.

Mr. Metz answered by saying that the report will have some comments on the impact on library management of the status of librarians.

Mr. Milczewski (Washington) expressed the hope that it might be possible to include in the report some mention of the relationship between state legislators and the budgets of the libraries of state universities.

Mr. Kaser (Cornell), referring to an earlier point, agreed that it is possible that university-wide planning processes might not involve the library to the extent needed, and that the librarian, therefore, should go ahead with his own long-range planning. He felt, however, that unless the university is actively involved the librarian will not accomplish much.

Mr. McCarthy invited those ARL representatives who had not as yet made suggestions for the improvement of the report to write either to him or Mr. Haas. Statements received will be passed on immediately to Mr. Metz.

Mr. Haas thanked Mr. Metz, Mr. Wilsey and members of the panel for their remarks.

Copyright Committee

Mr. Bryant asked Mr. Clapp, chairman of the Copyright Committee, to comment on the committee report which had been distributed. [The report appears in the Minutes as Appendix C.]

Mr. Clapp recounted the efforts of the ARL and ALA groups concerned with copyright revision to have the revision bill modified to make it more acceptable to librarians. They had been successful in some areas, but had not succeeded in changing Section 108 (d)(1). This section, in effect, makes the library responsible for determining that material which it photocopies cannot be obtained through trade sources. This objectionable section is still part of the bill which will be reported by the Senate Subcommittee on Copyright, Patents and Trademarks to the Senate Judiciary Committee. Mr. Clapp pointed out that the Senate probably will not take action on the bill before May 1970, and may not take it up at all during this session of Congress. He stated, however, that librarians could not count on the bill

not being acted upon and must continue to press their Senators for a change in this particular portion of the bill.

Mr. Edmon Low, chairman of the ALA Copyright Committee, agreed that librarians could not live with the provisions of Section 108 (d)(1). He felt, however, that it would be easier to modify this section by introducing additional language than by deleting it. It is important that both the ARL and ALA agree on this additional language in order to present a united front to the Senate Judiciary Committee. He recommended that the following statement be inserted after the words "reproducing services" in this subsection:

> "... has certified in writing to the library or archives that such copy will be used in accordance with the provisions of Section 107."

If this statement could be included, it would make the requestor responsible for whatever use he might make of a photocopy provided by the library.

Mr. Low reported that William North, ALA attorney, thinks this is a sound proposal, but wishes to have the opinion of Philip Brown, ARL counsel, and Mr. McCarthy. If they are in agreement, Mr. Low will propose this additional language for approval by the ALA Council at its meeting on Wednesday, January 21. Subsequent to that approval, it will be imperative that ARL and ALA members contact their Senators urging approval of this change.

Mr. Clapp thought this recommendation, if implemented, would ameliorate the most injurious provision in the bill. He assured the membership that the Copyright Committee will give them specific information on subsequent action which must be taken.

Mr. Bryant thanked Mr. Clapp for the considerable effort he had expended on this matter.

Before turning over the president's gavel to Mr. Haas, Mr. Bryant thanked Mr. Buckman and his colleagues for the pleasant and informative visit to the Northwestern University Library. He then presented the gavel to Mr. Haas and wished him every success during his tenure as president of the ARL.

Mr. Haas adjourned the meeting at 5:15 p.m., January 18.

The next meeting of the Association of Research Libraries will be held in Detroit on June 27, 1970.

APPENDIX A

REPORT OF THE ARL AUTOMATION COMMITTEE

Since its last report the Automation Committee has considered the suggestion that it sponsor a study of the costs of automation in the library. It is obvious that library administrators need costing data to assist them in decision-making; however, the committee was in general agreement that at this point in time it would not be feasible to develop a realistic analysis which would have general application. Library automation is still in the experimental phase, and we do not have sufficiently reliable data upon which projections can be based. Some of the variables which frustrate a cost analysis are types of hardware, accurate predictions as to programming costs, the difference in file conversion costs among libraries, different ways of charging for computer time and overhead, and the reliability of estimating production costs.

The committee also considered the cost tables which will appear in Hayes's Handbook of Data Processing for Libraries. It was agreed that the tables provide a useful list of factors and a good methodology for determining local costs of automation; however, the majority of the committee were cautious about the present knowledge of cost elements which might be applied to such tables.

At the suggestion of the ARL board, the committee agreed to sponsor a program for the midwinter meeting, which would be a non-technical discussion of typical major decisions which must be made by library administrators in automating their libraries.

James E. Skipper

December 1, 1969

APPENDIX B

REPORT OF THE ARL COMMITTEE ON COPYING MANUSCRIPTS AND UNPUBLISHED MATERIALS

The immediate cause of the creation of this committee lies in the discussions during a meeting on the photocopying of manuscripts in library collections, held on January 10, 1969, at the Cosmos Club, Washington, D. C., under the auspices of the Council on Library Resources. This meeting had occasion to refer to the existing statements of policy issued by the ARL (The Materials Reproduction Code, 1940, and The Use of MSS by Visiting Scholars, 1951) and found that they needed updating. This fact was communicated to the ARL board of directors, and as a result the present committee was designated in June-July 1969.

In August, just as the committee was girding its loins, it learned of the work being done in this area by the Ad Hoc Manuscript Collections Committee for the Rare Books Section of the Association of College and Research Libraries. The statements resulting from this work ("Standards Affecting Accessibility of Manuscript Materials," "Standards Affecting Photocopying of Manuscript Materials," and "Statement of Provenance and Integrity of Manuscripts") were published in AB Bookman's Weekly 44:552, August 25, 1969. The ARL committee immediately apprised both Mr. Howard L. Applegate of Syracuse University (a principal in the Ad Hoc Committee) and Mr. Robert J. Adelsperger, the chairman of the Section, of its desire to collaborate, but the issue has not been joined further.

On October 25, 1969, the Folger Shakespeare Library held an all-day meeting on the problems connected with the photocopying and facsimile publication and reprinting of books and manuscripts from library collections. This conference, among whose eighteen participants were four members of the ARL committee as well as Mr. Adelsperger of the ACLS Rare Books Section, covered some of the same territory as the other groups, but with a slight difference; it was interested in the extent to which a library should control or benefit from copying and publication ventures making use of its materials. The meeting designated a committee, headed by Herman W. Liebert of the Beinecke Library, to draw up standards of quality control, and the whole group is to meet in New Haven on April 25, 1970, to receive the committee s report.

Meanwhile, the ARL committee has not taken further action.

Verner W. Clapp, Consultant
Council on Library Resources

January 14, 1970

APPENDIX C

REPORT OF THE ARL COPYRIGHT COMMITTEE

I. Revision of the Copyright Law

A. Developments. The situation since my last report (June 11, 1969) has deteriorated. Since that date the library groups (consisting essentially of ARL's executive director, Copyright Committee, and legal counsel; ALA's associate executive director in charge of the Washington office, Copyright Committee, and legal counsel) have been diligent but quite unsuccessful in effecting modification of the Copyright Revision Bill (except in minor particulars) so as to avoid the threatened damage to libraries.

It would not be useful to review in detail the activities of the library groups; they have employed such means as were open to them--making use of the offices of the Copyright Office for drafting compromise statutory language and arranging meetings with representatives of the copyright industry; calling on members of the Senate Judiciary Committee and/or their assistants and the staff of the Patents, Trademarks and Copyrights Subcommittee; sending letters and briefs to various legislators and other officials; participating in meetings of the Ad Hoc Committee on Copyright Law sponsored by the National Education Association. In these activities they have called as appropriate upon the assistance of colleagues who are constituents of individual legislators or who are otherwise potentially persuasive.

At the end of September, the ARL-ALA groups learned that a revised bill might be reported to the full Senate Judiciary Committee by the end of the following month, but they had reason to believe that it would not reflect the library viewpoint. In consequence, in hopes of influencing the drafting, they collaborated in preparing an issue of the ALA Washington Newsletter, vol. 21, no. 10, October 7, 1969, "Action Needed on Copyright" (copies of which were sent to the membership), and at the same time redoubled their efforts to bring the library position to the attention of the legistlators.

The revised text of S. 543, confirming many of their worst fears, appeared as a committee print under date of December 10, 1969. It is understood that in this text the bill is to be presented to the full Senate Judiciary Committee during January 1970, may thereafter be referred to the Commerce Committee (because of its provisions regarding broadcasting) and be brought to the floor of the Senate not before May.

B. The December 10, 1969 text of the Revision Bill. A copy of the text of Sec. 108 of the bill, "Limitations on exclusive right: Reproduction by libraries and archives," is appended as Attachment A.*

Subsec. (b) covers "archival copying." This is satisfactory.

Subsec. (c) covers copying for replacement of damaged, deteriorating, lost or stolen material. It assumes that the replacement is to be of an entire work, and permits this to be done by facsimile only when an unused replacement cannot be secured through trade channels. It does not provide for the replacement of portions of a work such as single pages. It is of course possible that this might be covered by the "fair use" provisions of Sec. 107, but whether this is the case or not can be ascertained only by litigation. Libraries (similarly to publishers) need more assurance of their rights than the right to be sued to define them.

Subsec. (d), the heart of the matter, covers copying (by any method--manuscript, typescript, photocopy or other) for library users, including those who make their requests through other institutions (e.g., for photocopies in lieu of interlibrary loan).

In the first place, musical, pictorial, graphic or sculptured material, motion pictures or other audio-visual works are excluded. It is not apparent what constitutes a "pictorial" work (anything with pictures?) or a graphic work (anything containing a map?), or why these or the other categories should be excluded. In the second place, the user must demonstrate to the library that an unused copy cannot be obtained through trade sources. There are other restrictions as well.

This subsection, like the preceding, assumes that the entire work is to be copied. No provision is made for copying a portion of a work. It is of course possible that the copying of a portion of a work (an article, a chapter, a page, a paragraph) might be adjudged "fair use" under the provisions of Sec. 107; but whether this is the case or not can be ascertained only by litigation (the bill does not even say by whom a determination of "fair use" is made). Libraries need more assurance of their rights than the right to be sued to establish them.

Subsec. (e) relieves libraries and their employees from liability for copyright infringement for the unsupervised use of reproducing equipment on their premises, under certain conditions. This is satisfactory so far. But this relief will not permit libraries to employ photocopying for important administrative purposes (such as the pooling of duplicating sets of little-used materials on the presumption of sharing through photocopying); and there is no assurance that this relief will not be the next

victim in the steadily eroding copying rights of libraries.

There are other provisions of the bill directly affecting libraries.

Sec. 106 (4) and (5) will annul the right which libraries now have of public not-for-profit performance of non-dramatic musical and literary works and motion pictures.

Sec. 109 graciously permits the owner of a copy of a copyrighted work to sell it, and even to show it to persons in the same room. These permissions are characterized as "privileges."

Sec. 504 provides for statutory damages in the case of willful infringement as high as $50,000. However, this section extends the "innocent infringer" principle to librarians, who may be relieved of damages if they can show that they infringed in the reasonable belief that they were making fair use.

Sec. 601-2 no longer grants explicitly to libraries (as does present law) the right to import copies of works in English manufactured abroad or of foreign editions of domestically copyrighted works, but restricts this permission to non-profit scholarly, educational and religious organizations for use in their libraries. This may be expected to subject libraries to securing by roundabout methods through others what they now secure directly in their own right.

Title II creates in the Library of Congress a National Commission on New Technological Uses of Copyrighted Works to study and compile data on the reproduction and use of copyrighted works in conjunction with automatic systems for storing, processing, retrieving and transferring information and with various forms of machine reproduction, as well as on the creation of new works resulting from such. The Commission is to recommend changes in the copyright law.

C. What should ARL be doing?

1. We should make the best use of the little time remaining. Few Senators have had an opportunity as yet to understand the issues involved. It is very possible that some of them, if properly approached, may recognize that the public interest is endangered. Write immediately to the members of the Senate Judiciary Committee (a list is appended as Attachment B).* Get others to write.

2. Explain that although Sec. 108 appears to give libraries copying rights, the conditions are so onerous as in practice to nullify rights which libraries have possessed since the dawn of library history--namely to

facilitate the making of single copies of materials in their collections to assist the studies of their users. There was never any question regarding these rights prior to 1909 when the prohibition of the Copyright Law was directed against "printing," not "copying." But in 1909 the change in language was made to take care of the reproduction of sculpture and other non-print material. Many years later it was realized that this literally prohibited all copying--manuscript as well as photographic, individual as well as library. But this literal interpretation has never been tested in the courts.

3. Point out that proponents of the bill parry library criticism by stating that library photocopying could continue under the "fair use" provisions of Sec. 107. But (i) libraries could never know whether their use was fair until they were sued for infringement and the case adjudicated (incidentally, Sec. 107 does not even say who is to make the determination of "fair use"); (ii) it is likely that most library photocopying is not subject to the "fair use" doctrine, because libraries are not themselves the users of the copies they make for others; (iii) no court has as yet ruled on either of these points; (iv) in any case it is intolerable that important social agencies such as libraries should be required to submit to threat of suit in order to discover whether their practices are legal; (v) it is the obvious responsibility of Congress to reach a determination in this matter and not pass the buck to the courts.

4. Proponents of the bill state that it will not reduce the present rights of libraries. On this point see the opinion of ARL's counsel (Attachment C).

5. Libraries do not--repeat not--claim unlimited copying rights, but only the right to make single copies to assist the serious study, investigation and research of their users, and for certain administrative purposes (principally security, replacement of mutilated material, and substitution for loan of original materials).

6. All studies to date show that no damage to sales has resulted from library copying. On the contrary, there are indications from independent sources that it has promoted sales.

7. All research has always been dependent upon note-taking and copying. Photocopying is merely the modern method of note-taking, required by present-day masses of research material and the complexity of modern research.

8. Copying, including photocopying, when not for publication or sale, is merely a normal use of purchased material.

9. The bill is consciously an industry bill. In spite of the Constitutional provision that subordinates the interest of copyright

APPENDIX C

proprietors to the public interest, the latter has been consciously ignored by the bill: the not-for-profit provisions of the 1909 and subsequent acts have been erased, and the exclusive property rights of owners of copies of copyrighted works have been watered down to "privileges."

II. The Williams & Wilkins Co. vs the USA (Petition 73-68 filed in the U. S. Court of Claims 2/27/68).

Pre-trial "discoveries" and similar proceedings are still in process. No date has been set for trial.

Verner W. Clapp, Consultant
Council on Library Resources

January 14, 1970

*[Attachments A and B are not included in these Minutes.]

APPENDIX C

Attachment C

COX, LANGFORD & BROWN

PHILIP B. BROWN
JOHN P. FURMAN
ROBERT D. PAPKIN
WALTER T. SKALLERUP, JR.
RANALD D. HOBBS
RITCHIE T. THOMAS
STEPHEN C. LIEBERMAN

1521 NEW HAMPSHIRE AVENUE, N. W.
WASHINGTON, D. C. 20036
TELEPHONE 483-2414
AREA CODE 202
CABLE "COXFIRM"
TELEX "CLXB 440033"

OSCAR COX
(1946-66)
MALCOLM S. LANGFORD
(1946-62)

January 15, 1970

Dear Steve:

This letter is in response to the question which has been raised with you as to why the rights of libraries under the pending Copyright Revision Bill would not be adequately protected by a possible statement in the Senate Report to the effect that nothing in the new bill is intended to deprive libraries of any of their rights under existing law.

Since the Senate Committee Report on S. 543, 91st Congress, has not yet been issued, we do not know the exact wording in which such an assurance may be given in the report as informally indicated to us by Mr. Brennan of the Senate Copyright Subcommittee staff, but, for purposes of this letter, we assume that it will be stated in unqualified terms. It is our opinion that, even if the report contains an unqualified assurance that the pending bill does not deprive libraries of any of their rights under previously existing copyright law, such an assurance would not adequately protect libraries, and we believe the pending bill should be further revised for the protection of libraries and their users, for the following reasons:

1. Section 108(d)(1) of S. 543 (Committee Print December 10, 1969), which deals with the right of a library to make a single copy of a copyrighted work for a user, requires the user to establish to the satisfaction of the library that an unused copy cannot be obtained at a normal price from commonly-known trade sources in the United States, including authorized reproducing services. In our opinion, this specific provision denies to a library the right to make a copy of a work for a user whether or not an unused copy is available from

trade sources - a right which we believe a library could assert under the 1909 Act even though that Act contains no specific provision either authorizing or denying such a right to a library.

The reassurance suggested by Mr. Brennan that pre-existing rights of libraries remain unaffected would not in any way alter or affect the explicit wording of Section 108(d)(1) of the new bill. Presumably, it is Mr. Brennan's view that a library does not presently have the right to make a single copy for a user when an unused replacement is commercially available and, therefore, the enactment of 108(d)(1) merely restates existing law or, at most, clarifies an ambiguity but does not affect the rights of a library. If this is his view, we respectfully disagree with it and we note that for the past 60 years libraries have made a copy of a work for a user even when a replacement is commercially available and have done so without court challenge by copyright proprietors other than for the Williams & Wilkins case pending in the Court of Claims.

2. The legislative history of the predecessor bill, H.R. 2512, which may or may not be incorporated into the legislative history of the pending bill, S. 543, includes certain statements inconsistent with, or contradictory to, long-asserted rights of libraries. These include the statement on page 35 of House Report No. 83, 90th Congress, suggesting that any unauthorized copying which might displace a sale of a copyrighted work, however minor the copying, constitutes infringement. If statements such as this remain in the legislative history they constitute further examples of what we consider to be a fundamental change in the existing legal rights of libraries. Here again, because the 1909 Act is silent, the legislative history of the new bill might consider such statements as mere clarifications of an existing ambiguity and, thus, not contrary to any existing rights of libraries. Such a view would reconcile such statements with the reassurance statement under consideration.

3. The 1909 Act gives the copyright proprietor the exclusive right to "copy" a copyrighted work. In our opinion, this right should be construed to mean multiple copying,

i.e., publication, since Congress surely did not intend to prevent a user from making a hand copy of a line of copyrighted material. S. 543, however, changes the language to give the copyright proprietor the new right "to reproduce the copyrighted work in copies. . . ." This change of language could have the effect of denying libraries the protection of the legislative history of the word "copy" in previous copyright laws. This point has been elaborated in detail elsewhere by Mr. Verner Clapp.

4. The pattern of the new copyright bill is to set forth in six separate sections each of the intended limitations on the proprietor's exclusive rights. If the bill is enacted in this form, it will be virtually impossible to contend that the proprietor's exclusive rights are subject to any limitation not clearly set forth in the new statute.

5. Although Mr. Brennan has suggested that the prohibition of Section 108(d)(1) applies only to the copying of an entire work, the term "work" is not defined in the bill and might well be construed to mean a single article in a single issue of a periodical. To the extent that Mr. Brennan's comment may be intended to suggest that a user may copy any portion less than the entire work, the bill does not make this clear and, lacking such clarification, a court might well construe the word "work" to mean any part of - as well as all of - a work.

As we have indicated in our correspondence and conferences with Mr. Brennan, we think there are still other respects in which the pending revision bill adversely affects the existing rights of libraries. We believe the foregoing points suffice, however, to establish that any sentence which might be included in the Senate Report as a reassurance that the bill is not intended to affect existing rights of libraries would be essentially meaningless if the bill includes Section 108(d)(1) in its present form.

Philip B. Brown

APPENDIX D

REPORT OF THE ARL FEDERAL RELATIONS COMMITTEE

The work of the Federal Relations Committee is continually subject to abrupt change by way of developments in Washington, but the membership may be interested in a few comments about committee work undertaken or intended following the committee's early November meeting at headquarters.

On that occasion we drafted a statement, "Priority Needs of Libraries in Support of Higher Education," and officially put it in the hands of a then recently established White House Task Force on Priorities in Higher Education. As of this writing, the final Task Force statement has not been seen, but we have been assured that our statement was given careful attention. The statement itself has been distributed to ARL members who may find it useful for other purposes.

The commiteee has a tentative list of persons in various categories who might be nominated by ARL for membership on or service with the National Commission if and when that body is instituted. This list will be considered, of course, by the ARL board.

We have been informed that in a reconsideration of an earlier vote the Senate Finance Committee now apparently proposes to permit donors of manuscripts and rare books to deduct the full market value for income tax purposes; that is virtually a return to the status quo ante.

The committee hopes soon to have a special audience with Commissioner Allen, and it will hope to make a similar arrangement with the President's Science Advisor, Dr. DuBridge.

In pursuing more long term goals the committee hopes to produce or elicit some cogent brochures on a variety of research library needs, of such a style that they can be put into the hands of legislators, trustees and other influential persons. The headquarters' staff has frequent need to provide this kind of advice and would be helped in responding if written statements were at hand. The priorities statement mentioned above may suggest something of what the committee has in mind in thinking about specific statements on federal funding, on resource development, on Title II-C, on automation, and the like.

In considering its rather large charge, the committee is of the opinion that it can best focus upon such broad matters as federal funding programs, the matter of a National Commission now and into the future, relationships with the Office of Education, and relationships direct or indirect with the White House. The committee feels that the matter of copyright receives and requires more specialized competence than it can provide. The committee also feels that it does not quite have competence

or available time to keep fully in touch with the important relationships of general research libraries to the federal science and technology establishment; thus it may seek a special subcommittee that will keep abreast of developments in this field and apprise the committee and membership of positions that should be taken or advice that should be given. This seems particularly important at a time when federal attitudes and programs as well as personnel are changing. Moreover, the committee is of the particular opinion that at a time when American values and goals may be shifting, the Association (and thus the committee) should perhaps give particular attention to supporting efforts in behalf of humanistic and social science training and research.

Robert Vosper

November 19, 1969

APPENDIX E

REPORT OF THE ARL FOREIGN NEWSPAPER MICROFILM COMMITTEE

The committee met in Washington on November 21 to review and discuss a preliminary report, A Study to Develop a National Foreign Newspaper Microfilm Program. The report was prepared by Norman Shaffer (formerly of the Library of Congress and now at the University of Nebraska Library), who is serving as principal investigator for the study. Mr. Shaffer, Stephen McCarthy (ARL), and Frazer Poole (Library of Congress) were present for the meeting. Mr. Shaffer will continue to develop the study based on discussion and guidance at the meeting and will report further to the committee at the Chicago meeting in January.

John G. Lorenz

December 2, 1969

APPENDIX F

REPORT OF THE ARL COMMITTEE ON TRAINING FOR RESEARCH LIBRARIANSHIP

The main work of this committee to date has been to conceptualize and promote a large-scale project to analyze and design a mechanism for meeting the training needs of research libraries. In part through its efforts, a grant was made by USOE to Rutgers University to conduct the first of three phases of such a study. The project has now been underway since July 1, 1969. Work of the project thus far has consisted of preparing and testing an instrument to collect data on the extent and scope of the need for personnel, and attempting to rationalize the complex of education and training elements necessary to the success of research libraries. It was the original expectation of the committee that it would also serve in a monitoring and advisory capacity to this project, but because of personnel changes in several places, notably at Rutgers and at USOE, this anticipation is now being brought up for review. A recent desire, moreover, on the part of the research team to reorient the study somewhat makes it even less likely that the committee can serve usefully in the furthering of its work. If, as now appears likely, the committee relinquishes its role in this particular study, it will be prepared immediately to address itself to other training questions and problems.

David Kaser

December 15, 1969

APPENDIX G

REPORT OF THE ARL COMMITTEE ON THE PRESERVATION OF RESEARCH LIBRARY MATERIALS

The following items, reflecting the interests and efforts of the Preservation Committee during the six months prior to the date of this report, are noted for the information of ARL members.

1. At the invitation of V. W. Clapp, several members of the committee (Haas, Henderson, and Williams) participated in discussions concerning the research program of the W. J. Barrow Research Laboratory. Following these discussions, held at the offices of the Council on Library Resources, Inc., and further work by Verner Clapp, the Barrow Laboratory research program was formalized and priorities for 1969-1970 were set. Emphasis is to be on projects designed to find ways to halt deterioration of existing books and on research to establish with more precision the effects of temperature, oxygen and light, humidity and other environmental factors on paper.

2. A proposal to prepare detailed specifications for the administrative, operational, and bibliographic organization of a national system for the preservation of library materials was prepared by the committee and members of the ARL staff and submitted to the Office of Education for funding. The object of work to be done is to expand on the Williams' study and earlier ARL decisions in order to establish details of a national system and to designate first steps for action. It seems imperative that the many individual research efforts and the steps being taken by individual libraries to preserve their own collections be somehow coordinated to gain full benefits from these efforts nationally and to establish a base for further progress.

3. Among the items of business on the agenda for the January, 1970, meeting of the committee are a review of work done by Richard Smith at the University of Chicago; consideration of the financial capacity of libraries to actively carry on preservation work; and procedural details for the proposed study described above.

Warren J. Haas

December 23, 1969

APPENDIX H

REPORT OF THE ARL SHARED CATALOGING COMMITTEE

The period since the last report from this committee has been one of considerable change for shared cataloging in the Nation. The major cause of change has been the threat of reduced funding for Title II-C for 1969/70, which necessitated a reduction-in-force of 131 positions in LC's NPAC staff. Other changes instituted include temporary suspension of the program in Brazil and certain operational economies. The Shared Cataloging Committee was consulted by the LC staff in the determination of areas of reduction.

Recent changes in national coverage by NPAC include the successful establishment of operations in Czechoslovakia and Bulgaria, the conversion on July 1 of the former PL480 office in Djakarta to a jointly supported agency involving LC and ten other research libraries, and improved cataloging service for East African acquisitions. Again LC has called upon the Shared Cataloging Committee for counsel in the determination of these and other NPAC priorities.

The committee has attempted to--and continues to attempt to--keep abreast of legislative action on Title II-C and to fill an interpretative role between the research library community and the Congress in matters of shared cataloging.

David Kaser

December 15, 1969

APPENDIX I

REPORT OF THE ARL/ACE ADVISORY COMMITTEE TO THE
UNIVERSITY LIBRARY MANAGEMENT STUDY

Because one of the major program items at the January, 1970, ARL meeting will be in effect a report of this committee and will be recorded in the Minutes in that context, this report will simply record the fact that the ARL, with the American Council on Education as co-sponsor, has begun what it is anticipated will be a major review of the processes of research library management, as demonstrated within libraries, individually and collectively. The first phase of the effort, funded by the Council on Library Resources, Inc., is essentially completed. A formal report designed to identify problems and to set priorities and procedures for their solution will be put in final form by the consultants employed by the committee immediately following the January ARL meeting. This report and the information generated in committee discussions will serve as a basis for many kinds of future action, the total end product of which, it is hoped, will include the development of effective analytical techniques to aid in policy formulation, the design of manuals, guides and procedures for specific management activities, the promotion of effective interinstitutional arrangements designed to improve research library capabilities, and a review of funding prospects and budgeting processes. The importance of ACE participation in this effort and specifically the contributions of the ACE representatives are underscored here.

Warren J. Haas

December 23, 1969

APPENDIX J

REPORT OF THE ARL NON-GPO PUBLICATIONS COMMITTEE

This committee has not held any formal meeting since our last report. The chairman has maintained continual communication with responsible administrative officers of the Library of Congress where the enlarged program of acquisitions of non-GPO publications is being studied with a view to determining what additional action may be useful. It is contemplated that the members of the committee may get together during the current meeting period (midwinter 1970) with the representative of the Library of Congress to discuss future activity.

Jerrold Orne

December 2, 1969

APPENDIX K

REPORT OF THE ARL REPRESENTATIVE TO THE AMERICAN NATIONAL STANDARDS INSTITUTE STANDARDS COMMITTEE Z39

The representative of the Association of Research Libraries to the American National Standards Institute Standards Committee Z39 continues to serve as chairman of this standards committee. He led a delegation of five members to the ISO/TC 46 meeting in Stockholm in October. He presented a report to the sponsor of Z39, the Council of National Library Associations, in December.

This standards committee has become increasingly active in producing national standards and in presenting American standards for international consideration. Its subcommittees have been increased in numbers and the published standards are now more numerous. There are currently four new national standards being circulated for ballot. A detailed report describing the whole scope and extent of the present work of this committee will be distributed at the meeting of the Association of Research Libraries in Chicago. Additional copies will be supplied upon request to my office.

Jerrold Orne

December 2, 1969

APPENDIX L

REPORT OF THE ARL REPRESENTATIVE TO THE JOINT COMMITTEE ON THE UNION LIST OF SERIALS

During this year, various documents were distributed to committee members, and some discussion of these took place at a meeting in Atlantic City on June 24. The principal topic was the development of a national serials data system.

With the completion of the so-called Phase I study by the Library of Congress under JCULS sponsorship, interest was aroused in next steps. A review of the Phase I report and the current status of work was given by an LC representative. News had just been released of the grant to ARL by the National Agricultural Library for the National Serials Pilot Project, although no details were yet available. A copy of the proposal was distributed to committee members in August for comment. It will presumably be taken up at the JCULS meeting in Chicago on January 20, 1970.

Some concern has been expressed as to substantive activity by JCULS and of its program discussions. These are also to be considered at the January meeting.

William S. Budington

December 15, 1969

APPENDIX M

REPORT OF THE ARL REPRESENTATIVE TO THE U. S. BOOK EXCHANGE

As the representative of the ARL to the Corporation of the U. S. Book Exchange, Inc., I have asked for the opportunity to present a special report to the ARL midwinter meeting. My two reasons for making such a report are really the two faces of a single reason: USBE wants to increase its distribution of publications to ARL libraries, and ARL libraries can benefit by using USBE more extensively for acquisitions.

USBE is no exception in the universal problem of rising prices; it has increased its fees in 1970 in order to help meet costs. The board voted to increase the annual membership fee to $25, the basic handling fee for books from $2 to $3 each, and the basic fee for periodical issues from $0.60 to $0.75 each. (Recent issues and the first issue supplied in each title requested are $1 each--no increase from 1969.) These prices are still comparatively low for the types of research publications which USBE distributes from its stock of over four million items.

However, in order to continue to maintain and improve its services, USBE also needs to increase its distribution. To be able to continue to answer requests rapidly, to provide single and scattered issues at the same fee as issues in long runs, and to offer automatic back-order service, USBE must maintain a high numerical level of distribution, and to increase it as much as possible each year. During the last six years, the number of publications provided to member libraries annually has increased from 584,000 to 652,000. USBE's goal for 1970 is at least 675,000.

ARL libraries have on the whole supported USBE over the years by becoming members and by depositing publications to help USBE maintain its collections for distribution. They have used USBE for acquisitions much less consistently than as a recipient for publications. It appears from the studies prepared by the USBE staff that many ARL-USBE members could profit by increased use of USBE as an acquisitions source, and that the primary barrier to such an increase lies in lack of proper communication between USBE and the key persons in the library, rather than in any deficiency in USBE's potential in either materials or services.

The staff has therefore requested that I ask ARL administrators to refer copies of this report to the persons in each library responsible for decisions on acquisitions sources, so that USBE information will be in the proper hands. The staff will then follow up by asking you to send to USBE the names and titles of such persons for future communications.

Study of ARL Library Use of USBE Membership

The records show that 78 main libraries of ARL's 85 institutions were USBE members in 1969. In addition, there were nearly 100 branches,

and affiliates which were also USBE members, but which have not been considered in this study because of the great variation in depth of administrative relationships in the institutions involved. It should be noted, however, that of the seven ARL institutions whose main libraries are not now USBE members, five have branches or affiliates as members, and seven of these are in the group receiving more than 1,000 items per year from USBE.

Only one ARL-USBE member has withdrawn because of the 1970 increase in membership fee. The 77 remaining ARL libraries in USBE's membership on January 1, 1970, constitute 4 1/2% of the total of 1,688.

In 1968, the last year for which complete figures on incoming shipments are available, ARL members provided USBE with 25% of all the publications fed into USBE, or 485,000 out of 1,950,000. Even without the contribution of the Library of Congress to this total,* the other 76 members were responsible for 287,600, or 15% of the whole.

In 1969, USBE provided to ARL members, in reply to their requests, a total of 42,117 publications. This represents 6% of the whole 1969 distribution of 652,000 periodicals and books.

Analyzing the statistics further, the USBE staff found that in 1969, 22 of the 78 ARL members, 28%, received from none to 10 publications each during the year. Half of these had placed no requests at all with USBE, and another five had sent in only one request each. On the other hand, this group of 22 libraries provided 61,420 of the publications USBE received in 1968: 22% of the non-LC total of 287,600 from ARL libraries, for an average of 2,892 items per library.

Seventeen more of the 78 members, 22%, received between 11 and 100 publications each from USBE in 1969, and another 18, or 23%, received from 101 to 500 items each. There were only seven libraries in a group receiving from 501 to 1,000 items each, but the number receiving 1,001 to 5,000 rose to 13, or 17% of the whole. One additional institution received almost six thousand items. The average 1968 deposit of publications sent to USBE by these last 14 members averaged 4,821 each.

The statistics lead to the conclusion that ARL-USBE members are as a group interested in supporting USBE by retaining membership, and that on the whole their interest is more consistently in the deposit of publications with USBE than in the use of the agency as an acquisitions source.

*LC's deposit of 197,400 publications in 1968 was made on behalf of all the Federal libraries in the District of Columbia area.

APPENDIX M

Having arranged the ARL libraries in the groups indicated above, according to the extent of their use of USBE for acquisitions, the staff could find no other common factors such as size, age, location, span of USBE membership, etc. within each group which might conceivably govern the extent of use. If the variation in use of USBE is, as it appears, random, it is reasonable to assume that USBE services and facilities could be equally useful to most or all of the ARL libraries, as the group of largest research libraries in the U.S. and Canada, if the proper contacts could be effected between USBE and each of the 85 ARL members.

In USBE's experience, when any research library with a sizable acquisition program does not use USBE the reason is almost always a gap in communications, a gap which can occur for any one of several reasons. For one, USBE has avoided as a policy the large-scale Madison-avenue advertising program, primarily because the cost would have to be met through increased fees to member libraries. Using as an alternative a word-of-mouth system, and relying on the satisfaction of member libraries with low costs and steady improvement of services, USBE has grown steadily if not as fast as it might have done. But this is a non-saturation method which is bound to leave gaps.

USBE's monthly newsletter and other publications, which go to each member library, carry up-to-date information about the services and materials available; but once there the information may not go to the right person, and the larger the library the more liable it is to go astray. If a knowledgeable person is not primed to receive and use the information, or if the key receiver is promoted or goes on to higher things at another library, the contact is broken. To compound the problem, the term, "Exchange," in USBE's title leads to routing of USBE information to the department charged with sending out duplicates, by-passing the acquisitions desks; and the word, "Book," can mislead the librarian who runs as he reads into neglecting USBE's four million periodicals as a source of serials acquisitions.

In 1970 USBE will increase its public relations program, endeavoring to reach and maintain contact with the key person in each library, so that person can test for himself the facilities available at USBE through the only possible method: placing requests and finding what the results are. This expanded public relations program begins with this approach to ARL libraries, and with the request that each ARL administrator refer a copy of this report to the members of his staff responsible for decisions in any and all of the following areas: acquisition of files of foreign or domestic journals for new or expanding programs, replacement of missing or damaged issues and volumes of serials, claiming, acquisition of monographs (both

in and out of print), stocking of undergraduate libraries, acquisition for area studies programs, and acquisition of foreign and domestic government documents. Attached to this report is a message from the USBE staff for the information of these persons.

W. Porter Kellam

January 17, 1970

APPENDIX N

REPORT OF THE ARL CENTER FOR CHINESE RESEARCH MATERIALS

Nineteen months after its establishment, the ARL Chinese Center is offering for sale 161 items of research materials. These titles are either in the form of reprints, or on microfilm, or in xerographic copies. They fall into the following categories: newspapers (5), periodicals (3), research aids (7) and monographs (146). All of these items have been bibliographically identified in English. A complete set of the Center's reproductions would cost $3,306.50.

Response to the activities of the Center has been most encouraging. Materials have been ordered by forty-five libraries and fourteen individuals or commercial firms in the United States, and by twenty-five institutions abroad. Total sales at the end of November, 1969, amounted to $42,878.49.

The availability of materials is announced through the Center's "Newsletter." All titles are provided with analytical and descriptive comments. Issue No. 3 of the "Newsletter," which has just been printed, will be sent to approximately one thousand readers in the United States and five hundred readers abroad. The Center continues to receive requests from institutions and individuals who wish to be placed on the "Newsletter" mailing list.

It is gratifying to note that the Center has become a much frequented place for scholars, students and public officials from both this country and abroad. During the past year, the Center was honored by visitors from the Universities of London, Essex and Munich; the Institut für Asienkunde, Hamburg; the Sinologisch Instituut, Leiden; the Academy of Sciences, USSR; the Australian National University; and the Universities of Victoria, Tokyo, Korea, Delhi and Hong Kong. In addition, the Center has welcomed scholars and officials from the Republic of China, Taiwan, and, of course, a large number of American scholars and students. All these visitors afforded the Center an opportunity to exchange views on subjects of mutual concern, and their suggestions for the Center's reproduction and bibliographical control projects were of particular interest.

It should be stressed that since the Center has no library collection of its own, it can undertake all of its projects only as a result of the full cooperation extended to it by research libraries,

which have granted the Center generous borrowing privileges.

In conclusion, it can be said that in a relatively short span of time the ARL Chinese Center has established itself as a nationally and internationally known organization in the field of Chinese studies.

P. K. Yu

December 15, 1969

APPENDIX O

REPORT OF THE ARL SLAVIC BIBLIOGRAPHIC AND DOCUMENTATION CENTER

At the time of this writing, the Center has been in operation less than three months. This report will therefore deal more with future plans than with past accomplishments. Much of our time has been spent on preparing a monthly guide to the selection and acquisition of current Slavic publications in the social sciences and humanities. Inasmuch as literature in these fields often goes out of print almost immediately after publication, titles included in New Slavic Publications will be selected by consultants (scholars in the various subjects) from a number of prepublication catalogs so that orders can be placed sufficiently ahead of time to provide reasonable assurance of getting the desired items. Such a timely selection tool should be of particular value to libraries which don't have Slavic subject specialists on their staffs, but which do need to build Slavic collections for their patrons. I have written letters to a number of potential consultants asking for their cooperation. The response so far has been very gratifying and we have now consultants for most fields and languages. The first sample issue of NSP should be ready for distribution in the spring of 1970.

In order to keep libraries and scholars informed of our activities, we are planning to issue a newsletter from time to time. The first number has already been sent to the printer and should be ready for mailing in January.

Another project, which is being discussed by the staff of the Center, deals with the problem of gaining bibliographical control over "fugitive" materials. These may be defined as reports, studies, and papers issued by academic institutions, government agencies, and individuals, which are generally not available through regular book-trade channels. In this connection, we visited a number of government agencies in and around Washington to gain a clearer picture of the nature and scope of this problem.

In the early part of October, the staff of the Center--as well as Mr. McCarthy and Mr. Martin--had a meeting with our advisory committee, chaired by Mr. Marion Milczewski, to discuss plans for our future activities. I was also invited by the Joint Committee on Slavic and East European Studies and by the board of directors of ARL to report on the Slavic Center at their respective meetings in New York City on November 7.

Finally, I should like to take this opportunity to introduce the other members of the staff: Miss Anita Navon and Mr. Murray Howder, both

librarians with extensive experience in the Slavic field, and Miss Adriane Baron, secretary. With their capable help--and the advice of the ARL office--the Slavic Center can look with confidence to a fruitful 1970.

E. Alex Baer

December 17, 1969

APPENDIX P

REPORT OF THE ARL MICROFORM TECHNOLOGY PROJECT

Title of Project: Determination of the Environmental Conditions Required in a Library for the Effective Utilization of Microforms and Determination of an Effective System of Bibliographic Control of Microform Publications.

As the project title clearly indicates, there are two distinct but related tasks involved in the microform technology project during the current year. Consequently, two principal investigators were appointed, each assisted by his own advisory committee.

Donald Holmes, project director, is principal investigator for Task I, "Determination of the Environmental Conditions Required in a Library for the Effective Utilization of Microforms." The members of the advisory committee to Task I are: Thomas Bagg (National Bureau of Standards); Forrest Carhart (Library Technology Project, ALA); Charles LaHood (Library of Congress); Carl Nelson (Consultant); Peter Scott (MIT); and Carl Spaulding (Council on Library Resources).

Felix Reichmann, assistant director of libraries at Cornell University, is serving as principal investigator for Task II, "Determination of an Effective System of Bibliographic Control of Microform Publications." He is being assisted by Miss Josephine Tharpe, of the Cornell University Libraries, who is acting as assistant principal investigator. The members of the advisory committee to Task II are: Samuel M. Boone (University of North Carolina); Helen M. Brown (Pennsylvania State University); Lyman H. Butterfield (Massachusetts Historical Society); Richard DeGennaro (Harvard University); and Allen Veaner (Stanford University).

TASK I

On July 1, 1969, Donald Holmes, principal investigator for Task I, began an extensive literature search for articles concerning the required environmental conditions for effective use of microforms. They were not found to be abundant.

In order to determine the location of good microform installations, letters of inquiry were sent to major manufacturers of microform reading equipment. Several useful replies were received citing effective installations, but none was claimed to offer the user ideal conditions.

APPENDIX P

The principal investigator visited installations recommended by manufacturers, committee members and other informed individuals. During each visit, the existence or absence of desirable environmental conditions was noted.

Meetings of the advisory committee to Task I were held on September 10-11, 1969, and on December 4-5, 1969. The first meeting was devoted to identifying those environmental conditions which were most important to an efficient use of microforms in a library. Subsequently, the principal investigator prepared a working paper containing specifications for these conditions, which was the basis of discussion during the second committee meeting. The ideas presented during that meeting are presently being incorporated into a second working paper, which will be reviewed by the committee on January 6-7, 1970.

TASK II

Mr. Reichmann assumed his duties as principal investigator for Task II on September 15, 1969. He and Miss Josephine Tharpe, assistant principal investigator, then involved themselves in an exhaustive literature search on the subject of bibliographic control of microforms. During a meeting of the advisory committee on December 3, 1969, Mr. Reichmann and Miss Tharpe reported that of the 1124 citations found, only 70 were sufficiently important to note.

The committee and the principal investigator agreed that Task II should concern itself with the bibliographic control of the master negatives used for the production of use copies of microfilm, microopaque, and microfiche reproductions of books, periodicals, newspapers, codices, manuscript collections, and archival material which constitutes a significant body of information. The geographic scope of the study will be world-wide.

There also was general agreement that implementation of any system of bibliographic control of microforms would depend upon the creation of a national microform agency. This agency would assist microform producers and users in the development and implementation of standards, would test microform products, and publish, on a regular basis, information on these products and on microform publication projects.

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Mr. Reichmann and Miss Tharpe are now engaged in extensive correspondence with all identifiable microform producers, both in this country and abroad. They also will correspond with ARL libraries and with a broad sampling of foreign libraries to identify their acquisition and cataloging activities as they relate to microforms.

Donald C. Holmes

January 5, 1969

APPENDIX Q

REPORT OF THE NATIONAL SERIALS PILOT PROJECT

Upon completion of the final report of Phase I of the National Serials Data Program, the National Libraries Task Force began to give consideration to the problem of proceeding with Phase II. As originally outlined, Phase II was to be a reduction to practice of the findings of Phase I. In essence, this implied a pilot project.

It was agreed that the pilot project would of necessity be limited in scope and coverage; consequently, at a fairly early stage it was decided to limit the pilot project to the holdings of live serials in science and technology in the Library of Congress, the National Agricultural Library, and the National Library of Medicine. The National Libraries Task Force approached ARL with the request that ARL accept responsibility for it. After some discussion, it was agreed that ARL would do so provided that appropriate funding were obtained. Such funding, in the amount of $100,000, was obtained from the National Agricultural Library, and an ARL Advisory Committee was appointed. The Advisory Committee consists of:

Mr. William Budington (Chairman)
Director
The John Crerar Library

Dr. Robert M. Hayes
Director
Institute of Library Research, UCLA

Mr. Roy L. Kidman
University Librarian
Rutgers University

Mr. John P. McGowan
Associate University Librarian
Northwestern University

Dr. Jerrold Orne
Director
University of North Carolina Libraries

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It has been agreed that the National Libraries Task Force will provide policy guidance; the ARL Advisory Committee will have some influence on its formation, but policy will originate from the National Libraries Task Force.

A project director was employed as of mid-September, 1969. Since then there has been much thought and discussion concerning the details of what was to be done and how it was to be done. It has been concluded that the immediate objectives of the pilot project shall be (a) to create a machine-readable file containing live serials in the fields of science and technology held by the three national libraries, (b) to produce a number of preliminary listings, including a union list and such other lists as may be of interest to management, and (c) to produce one or more written reports relating to problems encountered, solutions found, information regarding the universe of serials, and recommendations for future activities. It has also been agreed that this project is a MARC serial-format-oriented effort and that any machine-readable output will be MARC data in the MARC format. It is expected that one of the results of the project will be the development of a standardized input format.

There have been problems relating to development of the internal system. At the present time it appears that the basic internal system will be the Library of Congress internal MARC serials format written in COBOL. (This is distinguishable from the MARC communications format, the MARC internal format, and the MARC internal serials format.) Input will be handled via a remote terminal, and the Library of Congress will prepare tapes for the project from our input utilizing their 360/40. Processing of the data will then be done on the 360/50 at the National Library of Medicine.

Apart from systems development, it has been decided that in collecting the data the checklist approach will be used. It is proposed to derive the basic checklist from the live serials recorded in the files of Chemical Abstracts Service; to this basic list will be added all titles from Index Medicus and Biological Abstracts not already part of the checklist. Each of the three national libraries will be asked to supply the project with certain information, the crucial element of which will be their holdings.

It is important to note that not all of the data elements provided for by MARC will be used during the pilot project. The programs will be capable of handling all MARC

data elements, but limitations of budget and of time preclude gathering and manipulation of complete detail for the present. For the same reasons, the checklist will itself represent only a portion of the total universe of live scientific and technical serials in the three national libraries.

As this is written, we are awaiting the completion of the programming, testing and debugging of the MARC internal serials format in COBOL by the Library of Congress ISO staff. So that no time will be lost, we are exploring the problems involved in the selection from and reformatting of the CAS files. It is expected that the Index Medicus and Biological Abstracts entries will be handled as key input rather than via reformatting owing to the technical problems involved in reformatting and merging files. Since actual data collection and subsequent manipulation must be contingent upon the existence of proved and adequate programs, and since no precise date can yet be assigned to the completion of work on these, it is not possible at this time to project a timetable. It is nevertheless hoped that by September of 1970 the pilot project will have served its primary purposes.

Donald W. Johnson

December 16, 1969

APPENDIX R

REPORT OF THE CENTER FOR RESEARCH LIBRARIES

REPORT OF RECENT ACTIVITIES

COST/BENEFIT RATIO

In fiscal 1968/69, the average dollar of Center membership dues gave the member the equivalent of well over $80 of local expenditures. Considering only acquisitions purchased by the Center, (i.e. ignoring the value of all gift materials, such as those received under P.L. 480, and all processing and other costs) the average dollar of membership dues was equivalent in access to about $45 of local purchases.

In the current fiscal year (1969/70) the cost/benefit ratios will be approximately the same as last year.

The above ratios are computed solely on the basis of a single year of the Center's acquisitions and operations. Since the Center has, as yet, no "initiation fee," a research library joining the Center now receives without cost access to all materials previously acquired by the Center (now approximately 2,750,000 volumes), and the cost/benefit ratio to such libraries is, therefore, several times larger than that cited above.

In part the high cost/benefit ratio of the last several years is due to the large grants for cooperative acquisitions received from the Office of Education: $306,003 last year, and $275,000 this year. But also in significant part it is due to the steady growth in Center membership, and, therefore, in the Center funds available for acquisitions. The Center now has fifty full and associate members, and each new member increases the cost/benefit ratio still further. A list of present members is attached to this report.

USE AND MEMBERSHIP POLICIES

Until July 1969, the Center's policy had been to lend any of its materials freely to any library, whether it was a member of the Center or not. The expectation had been that any research library regularly using the Center's resources to help satisfy the needs of its patrons would, in conscience, join the Center and help to provide the collections and services from which it was thus benefitting. But since some libraries had continued to make use of the Center's collections without joining, the members decided that some consciences needed assistance. Accordingly, they voted that after 1 July 1969 only libraries that became members of the Center and thus helped to build and support its collections would be permitted to make regular and

continuing use of them. The Center is, therefore, now turning down requests from libraries that have been making regular and continuing use of its collection, but have not yet become members.

There are two categories of membership in the Center--full and associate. Full membership in the Center is open only to institutions that maintain large research libraries as these are from time to time defined by the Council of the Center. As of now, these are defined as libraries with more than 500,000 volumes that are spending an average of more than $200,000 per year on acquisitions. Associate membership is open to institutions whose libraries are not large enough to qualify them for full membership. Associate members have essentially the same rights of access to the Center's collections as do full members, but have no representation or vote on the Council of the Center, and they pay a substantially smaller fee than do full members. Since the basic purpose for which the Center was established is to increase the library resources available for advanced research, this distinction is made to assure that those institutions responsible for governing the Center and determining its policies share a common interest and obligation in supporting advanced research in many disciplines and have essentially similar library problems. The associate membership permits those institutions with as yet smaller libraries and research obligations to use the Center's resources while the lesser fee is more commensurate with their research needs and obligations.

Institutions joining the Center may not elect one class of membership or another but may join only in the class which their qualifications determine. (All ARL libraries are qualified for full membership.)

The Center's membership fee is computed annually by a formula that includes several factors of which the institution's average annual expenditures for acquisitions is only one. Roughly, though, the present membership fee for full members is equal to only about one percent of their current acquisitions budget.

ACQUISITIONS

The Center's acquisitions are without restriction as to subject or language, and materials were acquired last year in virtually every subject field and from nearly every country. Major emphasis, though, has been given to some types of materials, particularly to backfiles on microfilm of foreign newspapers; backfiles on microfilm of U.S. newspapers; microfilm copies of foreign archives and of U.S. archives; miscellaneous major collections in microform, particularly of Asian materials though important microform collections of U.S. and European publications were also purchased. Total purchased acquisitions this last year were over $500,000.

APPENDIX R

Attached will be found a list of some of the Center's acquisitions during the past year. This is not a complete list; it is intended only to be illustrative of the kinds and classes of research materials being acquired.

DEMAND-PURCHASE PROGRAM

Because of its increased membership and larger budget for acquisitions, the Center has been able to initiate an imaginative program under which it can now provide its members with access to what is in effect virtually any title needed for current research in any of these major categories: foreign doctoral dissertations, backfiles of U.S. and foreign newspapers, and microfilms of U.S. and foreign archives. In these categories, the Center will now buy and make immediately available for use by a member any title needed for current research that is not already available for loan.

Until this program was begun, when a scholar needed a title in one of these categories that his library did not have and that was not owned by the Center or some other institution willing to lend it, the library had no choice but to buy the item itself, or to let the scholar do without it. Such local purchase of what, in terms of expected frequency of use, is more appropriate for cooperative purchase and shared inter-library use, is an inefficient use of the library's already limited budget for the purchase of materials more frequently needed on the campus.

Because of this program, any member library can now merely request from the Center any foreign doctoral dissertation needed and be assured that it will be provided if at all possible. If the Center already has a copy it will be sent immediately. If it does not have a copy but knows of another source from which one can be borrowed more quickly than the Center can buy a copy, it will so inform the requesting library. If no other such source is known, the Center immediately orders a copy from the university granting the degree; informs the library that it has been ordered; and as soon as it is received automatically sends it on to the requesting library.

Members requests for the Center to purchase microfilm copies of U.S. or foreign archives needed for present research need not be limited to titles or archives already on film. If already filmed, the Center will order a positive print. If not yet filmed, the Center will microfilm the collection itself, or have the microfilming done for it by a laboratory closer to the material, and in either case acquire and retain the negative if at all possible.

This program has not only assured scholarly access to needed materials with minimum delay, but it has also saved the members from having to acquire infrequently used materials solely at individual expense, and simultaneously it has assured widespread and ready access by their colleagues to this same

material without further cost when they may need it.

Under this program, the Center last year purchased over 700 foreign doctoral dissertations needed for immediate research. Examples of other materials acquired under this program are:

Parisien Libere, Paris. 1944-1947
Brownlow's Knoxville Whig. 1839-1969
General Records of U.S. Dept. of State Relating to the Internal Affairs of Mexico. 1910-1929
Selected archives of the Japanese Army, Navy, and other government agencies. 1868-1945
Letters received by the Office of U.S. Indian Affairs, 1824-1880
Personal papers of Benito Mussolini, together with some official records of the Italian Foreign Office and the Ministry of Culture. 1922-1944
Weekly People, New York. 1891-1967
Records of the Reich Commissioner for the Strengthening of Germandom.
Records of the Headquarters of the German Army High Command.
Records of the German Field Command, Rear Areas and Occupied Areas.
Florence (Italy). Census Records. 1427

PUBLIC LAW 480 MATERIALS

Under an arrangement begun last year, the Center, the National Library of Medicine, and the National Agricultural Library are dividing among them, basically by subject, one set of all publications acquired under the Public Law 480 program from:

Ceylon
India
Indonesia
Nepal
Pakistan
Yugoslavia

From each of these countries the Center is receiving a full set of all government documents. The monographs and serials are being divided by subject, with the Center receiving all titles except those in the fields of clinical medicine and psychology (which go to the National Library of Medicine), and those in the fields of argiculture, rural sociology, botany, entomology, and veterinary medicine (which go to the National Argicultural Library).

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In addition, the Center has bought a positive microfilm copy of all newspapers received from all P.L. 480 countries since the beginning of the P.L. 480 program (files begin at various dates from 1962 forward), and maintains a current subscription with the Library of Congress for their continuation. This newspaper coverage includes the following countries:

Ceylon	(5 titles)
India	(63 titles)
Indonesia	(14 titles)
Israel	(13 titles)
Nepal	(4 titles)
Pakistan	(15 titles)
Poland	(36 titles)
United Arab Republic	(13 titles)
Yugoslavia	(17 titles)

CATALOG AND HANDBOOK

In order more effectively and economically to enable the members to know the Center's holdings, the Center has discontinued supplying individual catalog cards to member libraries and is now printing its catalog in book form. For convenience in use the catalog is divided into three sections as follows:

Newspapers	(1 volume)
Monographs	(5 volumes)
Serials	(1 volume)

The newspaper volume was distributed in October; the first three volumes of the monograph section were just distributed this January and the remaining two volumes are on the press and should be distributed very shortly. The cards for the serial volume are being worked on by the catalog department and should be completed within the next few months.

Annual supplements will be issued for these catalogs, and these will be cumulated periodically.

One set of the book catalog is given free to every full member library, and sold for the cost of printing to associate members. Full members may buy as many additional sets at cost as they need. Copies of the catalog are available for sale to non-members at a price that includes part of the preparation cost.

In addition to the catalog in book form, the Center published and distributed this last summer its looseleaf Handbook describing the Center's collections, policies, and organization. Member libraries are provided with as many copies of the Handbook as they need for ready access within their

system. All such member copies will be kept current with new and revised sheets as necessary.

One copy of the Handbook was sent last summer to every ARL library not a member of the Center so that they might form a better idea of the Center's collections. There is no intention to send new and revised sheets to keep such non-member copies up to date.

AREA PROGRAMS

One of the major problems of many research libraries is that of providing adequate library resources for area studies, particularly those relating to some of the Asiatic and African countries. The written records relating to these countries have never been reproduced in large numbers--many in fact still exist only as manuscripts--nor have they been systematically collected by libraries in the past. Original copies of these records, even the printed ones, are now rarely available for purchase, and in any case not enough copies are available to satisfy all the libraries needing access to the material. Because of all of these problems, the Center, in conjunction with research librarians and the library committees of various scholarly societies, initiated a few years ago cooperative programs for the cooperative acquisition and sharing of access to microfilms of otherwise unavailable materials relating to Africa and South Asia.

Although both the African (CAMP) and the South Asian (SAMP) programs were originally designed to serve primarily the needs of research libraries and scholars in America, as these programs developed foreign libraries expressed interest in participating. Because of the advantage to American libraries no less than to those elsewhere in broadening the base of cooperation, appropriate changes were made to permit international cooperation on a fully equitable basis. As a result, these projects now have participants not only in the United States and Canada, but also in Europe, Africa and Asia. The result has been not only to increase the amount of money available for cooperative acquisitions, but has also notably increased the willingness of such foreign libraries to cooperate in making materials in their collections available for microfilming.

The South East Asian Microform project (SEAM), which is just now being organized, has benefitted from the experience of its two predecessors, and is being organized from the beginning as a fully international organization. The prospectus for SEAM is now in the final stage of preparation and will be sent to all ARL libraries as soon as it is ready.

ARL libraries not already participants in the African and South Asian programs and interested in learning more about them should ask the Center for details.

APPENDIX R

EXAMPLES OF CENTER ACQUISITIONS, 1969

Foreign Newspapers on Microfilm

Japan Times (Center now has a complete file for 1897+)

Freeman's Journal, Dublin. 1763-1924

Pall Mall Gazette, London. Feb. 1865-Oct. 1923

Petite Republique, Paris. 1890-1904

France-Soir, Paris. 1944-1952 (CRL now has 1944-1955; ARL Foreign Newspaper Microfilm Project has 1956+)

Frankfurter Zeitung. Frankfurt. (CRL now has on microfilm 1888-98, 1914-1920, and 1930-38; ARL Foreign Newspaper Microfilm Project has 1938+. CRL plans to microfilm the remaining gaps as quickly as possible.)

Parisien Libere, Paris. 1944-1947.

La Prensa, Buenos Aires. 1857, 1869-1937 (ARL Foreign Newspaper Microfilm Project has 1938+)

Russkiia Viedomosoti, Moscow. 1890-1895, 1897-Mar. 1918

Dong-a Ilbo, Seoul. 1923-1968

Labour Leader, London. 1894, 1897-Sept. 1922

El Sol, Madrid. 1922-1936

Defense de la France. 1941-1944 (Clandestine occupation paper)

Financial Times, London. 1962-1968

Novoe Vremia, Petrograd. May 1888-Nov. 1917

Novoe Vremia, Illiustrirovannoe Prilozhenie, Petrograd. 1891-1916

Sydney Morning Herald. 1831-1930 (1931-1937 has not yet been filmed; CRL will buy when available. ARL Foreign Newspaper Microfilm Project has 1938+)

Ta Kung Pao, Shanghai. Nov. 1929-1964

Shi Pao, Shanghai. 1909-1937

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U.S. Newspapers on Microfilm

Kansas City Star, 1880+

Kansas City Times, 1850-1965

Dallas Morning News, 1885-1965 (CRL now has 1885+)

Los Angeles Times, 1900-1951 (CRL now has 1900+. Will buy 1880-1899 when publisher has refilmed.)

Philadelphia Inquirer, 1866-1951 (CRL now has 1866+)

Tampa Tribune, 1895-1965 (CRL now has 1895+)

Washington Evening Star, 1852-1965 (CRL now has 1852+)

Washington Globe, 1831-1845

Washington Union, 1854-1859

Birmingham World, 1948+

Chicago Evening Post, 1890-1927 (CRL now has a complete file of this on microfilm)

Brownlow's Knoxville Whig, (Title varies) 1839-1969

Ashtabula Sentinel, 1832-1910

Justice, 1919-1968 (Publ. by International Ladies Garment Workers Union)

Foreign Archives on Microfilm

Personal Papers of Benito Mussolini, 1922-44

Choya-Kyubun Hoko (Documents on the foundation of the Tokugawa shogunate)

Dajo Ruiten and Kobun Riuju (Cabinet archives of Japan, 1867-1885)

Nazi Party Archives plus records of the personal life of Himmler (1919, 1935-1945) and Streicher for a similar period. (From Hoover Institution)

Stuart Papers, 1579-1823 (From Royal Archives, Windsor Castle)

APPENDIX R

German records captured in World War II. These include German Foreign Ministry Records going back in some cases to the mid-nineteenth century; Nazi party records; private and official records of important individuals; Army command records; and so on. The Center has already bought nearly seven thousand reels of this material and will continue to purchase until it has all available.

Florence (Italy). Census Records, 1427 and later years

U.S. Archives on Microfilm

(All collections are from the U.S. National Archives unless otherwise stated.)

General Records of the Dept. of State: Mexico; internal affairs. 1910-1929

American Federation of Labor, Letter Books, 1883-1925 (Filmed by Library of Congress)

U.S. Population Censuses (i.e. original, giving name, occupation, age, birthplace, &c.) First through tenth censuses, 1790-1880. (Nearly 7,000 reels of microfilm)

Letters of Indian Agents for Colorado River Indian Tribes

Papers of Baron Sonnino, Foreign Minister of Italy, 1914-1919

Miscellaneous Collections

German Baroque Literature (Microfilm of the Yale University Collection)

Justiz und NS-Verbrechen (Judgments of West German courts in trials of Nazi War Criminals) 21 volumes.

Chinese Folk Literature (from Academia Sinica, Taiwan) 232 reels

British Parliamentary Papers, 19th Century. (Irish University Press Reprint Edition)

French Revolution, Critical and Historical Sources (Microfilm)

City Directories of the US (Microfiche)

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Statistik des Deutschen Reichs. (Reprint). CRL had most of this in the original printing; by filling in gaps with the reprint edition the Center now has a complete file.

American Periodical Series, Civil War and Reconstruction. (Microfilm)

British Periodicals, General (Microfilm)

British Periodicals in the Creative Arts (Microfilm)

Gordon Williams

January 15, 1970

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MEMBERS OF THE CENTER FOR RESEARCH LIBRARIES

1970

Arizona
British Columbia
Boston Public Library
California, Los Angeles
California, Santa Barbara
Chicago
Cornell
Harvard
Hawaii
Illinois
Indiana
Iowa
Iowa State
John Crerar Library
Kansas
Kent State
Kentucky
Loyola
Marquette
Michigan State
Minnesota
Missouri
Nebraska
Northwestern
Nortre Dame
Ohio State
Pittsburgh
Princeton
Purdue
Rochester
Rutgers
Saint Louis
Southern Illinois
SUNY, Buffalo
Toronto
Utah
Washington (St. Louis)
Wayne State
Western Michigan
Wisconsin, Madison
Wisconsin, Milwaukee

Associate Members

Antioch
Carleton
Cleveland State
Earlham
Illinois State
Northern Illinois
Ohio University
G. D. Searle and Co.
Rosary (Chicago)
Squibb Institute for Medical Research
Wyoming

APPENDIX S

REPORT OF THE LIBRARY OF CONGRESS
TO THE ASSOCIATION OF RESEARCH LIBRARIES
MEETING IN CHICAGO, ILLINOIS, JANUARY 17 and 18, 1970

Legislation Relating to the Library

LC Appropriations for Fiscal 1970

With the passage of the Legislative Branch Appropriations Act (P. L. 91-145) and its signature by the President on December 12, 1969, the Library of Congress received operating funds for fiscal 1970 amounting to $43,856,300, an increase of $2,143,400 over fiscal 1969 appropriations.

The total provided $19,061,500 for LC salaries and expenses, an increase of $1,042,200 over last year's amount. This included an increase of $185,000 for space rental costs, an increase of $100,000 for preservation activities, bringing the total for preservation to $1,292,500, and $1,600,000 for the LC automation program.

For the Copyright Office an appropriation of $3,124,000 was made, an increase of $136,200. The Legislative Reference Service received a total of $4,135,000, an increase of $315,000; and the Catalog Card Distribution Service received $7,728,000.

Funds for the purchase of books for the general collections were increased by $85,000 to a total of $750,000, and the sum for purchase of books for the Law Library was raised by $15,000 to a total of $140,000. For the provision of books for the blind and physically handicapped $6,997,000 was appropriated, $329,000 above fiscal 1969. For the Public Law 480 Program $1,603,000 in U. S.-owned foreign currencies and $199,000 in hard-dollar support were made available.

Under appropriations for the Architect of the Capitol, $1,047,000 was appropriated for structural and mechanical care of the Library buildings and grounds, and $350,000 for furniture and furnishings.

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Library of Congress James Madison Memorial Building

Also included in the appropriation made to the Architect of the Capitol was the sum of $2,800,000 for final plans and specifications for the proposed third building for the Library of Congress. This appropriation, however, was made contingent upon enactment of a new authorization reflecting the increase in building costs. S. 2910, which increases the authorization for the new building from $75,000,000 to $90,000,000, was passed by the Senate on October 15. Hearings were held on it before the House Committee on Public Works and it was ordered to be reported favorably with a minor amendment, but in the rush for adjournment the bill did not reach the floor of the House and was held over for the Second Session of the 91st Congress.

Title II-C Appropriations

Since funds for the National Program for Acquisitions and Cataloging, administered by the Library of Congress, are provided by transfer from the Department of Health, Education, and Welfare and since its appropriation bill was not approved before the adjournment of the First Session of Congress, operation of the program remained dependent on a continuing resolution. The conference report (No. 91-781) on the HEW appropriation bill provided a total of $6,737,000 for the Title II-C program, in contrast to the FY 1969 appropriation of $5,500,000 and an Administration request of $4,500,000 for FY 1970. The conference report was approved by the House of Representatives before adjournment but not by the Senate, which deferred final action until after the start of the Second Session to forestall, it was stated, a pocket veto by President Nixon who had indicated that he would not sign the measure.

Supergrade Positions

The Librarian is authorized to assign 16 additional positions in the GS-16, GS-17, and GS-18 range following passage of P. L. 91-187, which was signed by the President on December 30, 1969. This law, designed to strengthen Government operations through recruitment and advancement of distinguished professionals, increases the LC allotment of supergrades to 44.

Tax Reform Act of 1969

Enactment of this legislation (P. L. 91-172) is expected to result in a sharp drop in the number and value of gifts of personal papers made to the Library of Congress and to other educational institutions. The status of the LC as well as other libraries as a recipient is not changed--it retains a "most favorable" status under Section 170 of the Internal Revenue Code--but the incentives to prospective donors are greatly reduced. Under the new law gifts of tangible personal property, especially of personal papers and other self-generated works, may be subject to more strict rules for determining the actual amount that may be claimed as a charitable contribution. Until the new provisions have been subjected to interpretation by the Internal Revenue Service and rulings by the courts, however, the situation will not be entirely clear.

Copyright Law Revision

After extensive consideration of many proposed amendments, the Subcommittee of the Senate Judiciary Committee which has had before it the copyright revision bill, S. 543, approved the bill with a number of amendments on December 10, 1969. The bill as amended is expected to be considered by the full Senate Judiciary Committee early in 1970.

Of particular interest to libraries are the provisions of the amended bill pertaining to library photocopying. The amended bill retains the general provisions in the original bill on fair use. It also retains, in substance, the provision permitting libraries to reproduce manuscript materials in their collections for purposes of preservation and security, or for deposit for research use in other libraries. To these it adds new provisions permitting libraries to make single copies of copyrighted works, without regard to fair use, in the following two situations:

(1) For the purpose of replacing a copy that is damaged, deteriorating, lost, or stolen, if an unused replacement cannot be obtained at a normal price from commonly-known trade sources.

(2) For the purpose of supplying a copy requested by a user, even of an entire work, under the several conditions (i) that an unused copy cannot be obtained at a normal price from commonly-known trade sources, (ii) that the library has no notice that the copy will be used for any purpose other than private study, and (iii) that the library displays a warning of copyright. But this provision for supplying a copy to a user does not extend to musical, pictorial, graphic, or sculptural works or to motion pictures or other audio-visual works.

Another new provision would excuse a library from any liability for unsupervised use of reproducing equipment on its premises, as long as a copyright warning is displayed on the equipment.

In all other cases, copying would be governed by fair use; and another new provision would permit a court to excuse a librarian from liability for damages if he overstepped the bounds of fair use in copying when he reasonably believed that he was acting within its bounds.

The amended bill includes the earlier provisions for the establishment of a National Commission to study the problems relating to the use of copyrighted material in computer systems and in machine reproduction. These provisions have been amended to reduce the size of the Commission from 23 to 13 members, one of whom would be the Librarian of Congress, and to expand the scope of the Commission's study to cover new kinds of works created by the new technological devices.

The fifth in the series of copyright extension acts, Public Law 91-147, was approved December 16, 1969. The effect of these acts is to continue until December 31, 1970, all renewal copyrights in which the 56-year term would otherwise have expired between September 19, 1962 and December 31, 1970.

Preservation Program

When the Preservation Office was reorganized in 1967, plans were made to establish a Research Office to conduct original investigations and studies in various aspects of preservation. The Library requested and was granted funds in its 1970 budget to employ a director for the proposed office, as well as funds for two supporting positions. Approximately 3,000 square feet have been allocated to laboratory space in the Annex. Added impetus was given this program through the recent approval by the Council on Library Resources of a grant with which to procure "start-up" equipment for the new laboratory. The Library is now searching for a qualified scientist to head the new research office and to direct the scientific program.

Within the next few months, the Library's restoration shops will move to larger quarters in the Annex building, where new and more modern equipment and more efficient working conditions will enable the shops to undertake a much wider variety of restoration tasks. In addition, a map restoration shop is now being established at the Pickett Street Annex, the new home of the Geography and Map Division. This shop should be operating within the next 2 or 3 months.

As reported at the Atlantic City meeting, the Preservation Office and the Motion Picture Section of the Prints and Photographs Division have cooperated in the development of a dry-film processing laboratory to convert deteriorating nitrate film to triacetate film. Vivian D. Armstrong has been appointed director of the film laboratory, which is expected to begin operations about April 1.

Pending appointments of several experts in various phases of preservation work will further increase the capabilities of the Library's restoration shops.

During this fiscal year the Restoration Office will begin a library-wide survey of the collections, as the basis for a long-range program to restore and preserve these materials. Preservation work in other areas has also increased and some statistics may be of interest. In fiscal 1969, the restoration shops restored or treated more than 6,000 items from the rare book collection, more than 70,000 manuscripts, 50,000 maps, and 13,000 prints and photographs. The Preservation Microfilming Office prepared 4,000 brittle books for microfilming. In all, more than 3,500,000 microfilm exposures were made of deteriorating materials, while 900,000 feet of deteriorating nitrate film was converted to safety-base film.

National Program for Acquisitions and Cataloging

The Library originally requested $11,100,000 for the National Program for Acquisitions and Cataloging (NPAC) for fiscal 1970, the amount authorized by Title II-C of the Higher Education Act (HEA), as amended. The revised Administration budget request for NPAC was for $4,500,000--$1,000,000 below the amount appropriated for fiscal year 1969. As reported above in the section on legislation, the House and Senate Conference Committee on Appropriations for the Departments of Labor, and Health, Education, and Welfare recommended $6,737,000 for transfer to LC for Title II-C of the HEA for fiscal 1970 instead of the $5,500,000 provided by the House and the $7,356,000 provided by the Senate. The amount that will actually be available is, of course, still in question because of the threatened Presidential veto of the bill. In addition, there is the possibility that if increased funding should be approved by the Congress, the Bureau of the Budget may not release funds in excess of those requested by the Administration.

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Furthermore, the outlook for fiscal 1971 is, at this time, discouraging. The Washington Post reported the following on December 5, 1969: "The White House has told the Office of Education to hold its fiscal 1971 budget down to $3.4 billion, slightly less than the office spent a year ago and 20% less than Congress has already given it this year.... Overall, the budget contains virtually the same amount for higher education that Congress appropriated in fiscal 1969."

With the very real possibility that only $4.5 million will be available for fiscal 1970, the Library has had to develop economies that would keep expenditures within this amount without endangering the foundations of the program. For example, the distribution of depository sets of LC cards has been reduced to 89 participants. Distribution of Chinese, Japanese, and Korean language cards has been limited to 41 interested libraries; and a similar cutback for South Asian language cards is envisaged. The acquisitions guidelines enunciated in NPAC Progress Reports no. 8 and no. 9 have also helped to reduce expenditures by eliminating materials of marginal value such as calendars, slip laws, promotional leaflets, correspondence courses, unrevised reprints, certain translations, etc.

The uncertainty of Title II-C funding for fiscal years 1970 and 1971 has prevented the Library from recruiting and training needed staff members and from meeting the problems of production imbalances caused in part by the reduction-in-force of NPAC employees during the latter part of the fiscal year 1969.

Reports from participating libraries as a result of their searching orders and receipts against the depository sets continue to be an important source of acquisitions information for NPAC. From the beginning of the NPAC program to December 1969, 382,302 reports from participating libraries have resulted in orders being placed for 83,758 titles. Another benefit of this reporting procedure is that titles reported receive a higher cataloging priority than other foreign titles because through NPAC, LC is cataloging "on demand" for other libraries.

Under the NPAC program, LC has increased its cataloging production 81 percent from 110,000 new titles in fiscal 1965 to 200,373 titles in fiscal 1969.

The NPAC center in Nairobi recently concluded a cooperative arrangement with J. D. Pearson, Librarian of the School of Oriental and African Studies (SOAS), University of London. Since SOAS has one of the greatest single concentrations of talent and knowledge of the Bantu languages extant, LC has made provisionsl arrangements for the preparation of data sheets for books in African vernacular languages for which language competence is not available in the Nairobi office. According to estimates, 132 such vernacular titles were received by the Nairobi office in 1967 and 124 in 1968, covering an identification to date of 83

vernacular languages in which some printing is done in Eastern Africa. SOAS will prepare a data sheet for each title sent and will return a copy to Nairobi for inclusion in the Accessions List: Eastern Africa. Another copy will be sent with each publication to Washington, where processing of the books will be completed. Volume 2, number 4, parts I and II of the quarterly Accessions List: Eastern Africa appeared in October. Part II is the annual serial supplement, which this year lists over 1,000 serial titles that were published in Eastern Africa.

Public Law 480 Programs

Recent developments indicate that the limited Israeli pounds that support the present reduced PL-480 Program in fiscal 1970 will probably be renewed in fiscal 1971, thus extending the program in Israel for at least one more year. The amount to be made available is unknown, but it is hoped that it will suffice to provide copies of current monographs for the present 20 participants. Serial subscriptions for participants ceased as of December 1969, but late in November lists of serials, providing complete ordering information for each title, were distributed to the participants.

LC's request for funds to expand the PL-480 Program to Morocco and Tunisia in fiscal 1970 was disallowed. In Indonesia, rupiahs were not available to continue the Program beyond June 1969, but a successful transition to a Title II-C regional acquisitions operation was made with provisions for the distribution of 10 sets of publications to as many institutions, each contributing $3,000 annually for the publications and $1,000 toward administrative costs.

Exchange and Gift Division Activities

Monthly Checklist of State Publications

With its December 1969 issue the Monthly Checklist of State Publications marked the completion of 60 years of continuous publication. Compiled by the Exchange and Gift Division, the Checklist is the Library's oldest serial publication with the exception of the Annual Report of the Librarian of Congress and issuances of the Copyright Office. The Checklist covers the publications of all 50 States and the territories and insular possessions of the United States, as well as associations of State officials and interstate organizations. Besides documents issued by the various departments, bureaus, and other administrative agencies of State governments, the Checklist includes publications of State-supported societies and institutions. During its six decades the Checklist has grown from an initial listing of 3,500 titles to over 21,000 entries in Volume 60. The publication has not only provided bibliographic control for the documents listed, but it also, through the acquisition of the publications themselves, has made it possible for LC to assemble a broadly comprehensive collection of State documents. In connection with its interest in this field the Library has encouraged State

governments to establish central documents depositories to collect and distribute the publications of their respective States. At present 40 States have such central depositories, almost all of which furnish documents to LC, and 21 States have enacted laws requiring distribution of specified types of publications to the Library. Nine States--Iowa, Kentucky, Maryland, Minnesota, New Hampshire, North Carolina, Ohio, South Dakota, and Utah--require by law that at least one copy of each State publication be sent to the Library.

Acquisition and Distribution of Federal Documents

The establishment of a Federal Documents Section in the Exchange and Gift Division has been approved. One of the division's primary responsibilities is to acquire U. S. Government publications for use in LC's exchange program as well as for the Library's own collections. The new section will centralize all activities concerned with acquiring and distributing Federal documents that were previously carried on independently by several sections of the division. Under the proposed reorganization, the present U. S. Government Publications Bibliographic Project and the Document Expediting Project will be brought together into one section. Other division staff members whose work is exclusively concerned with the handling of Federal documents will also be transferred to the new section. The preliminary phase of this consolidation is already under way and early results indicate that many of the complications formerly encountered in procuring and distributing Federal documents will be eliminated, with important economies in time and manpower.

Non-GPO Imprints

The Exchange and Gift Division's U. S. Government Publications Bibliographic Project (commonly referred to as the Non-GPO Project) reports significant advances in its effort to obtain U. S. Government publications issued outside the Government Printing Office and to assure some form of bibliographic control over them. Compliance by Federal agencies with Bureau of the Budget Bulletin 67-10 appears now to be very satisfactory. Virtually all agencies which did not respond to the Bulletin directive during the year following its issuance have been contacted and in large part are complying.

Throughout the past year receipts of non-GPO imprints have averaged 5,200 pieces per month, with the Department of Transportation continuing to be the largest supplier. The project staff has also noted an increase in receipts under this program from the Department of Agriculture, especially publications of the Soil Conservation Service.

Since its inception, the Non-GPO Project has regularly sent to the Superintendent of Documents sample copies of the publications it receives that are within the scope of the Monthly Catalog of U. S. Government Publications. Although it originally appeared that only a few of the titles submitted would be selected for inclusion in the Catalog, the trend since April 1969 has been toward inclusion of virtually all titles submitted. Between April and the end of October 1969 the Project sent 1,596 publications for consideration by the editors of the Monthly Catalog; of them, 1,490 (or approximately 93.3 percent) were included in the Catalog. Thus it no longer appears necessary for the Library to issue a monthly list of non-GPO imprints; however, a Non-GPO Imprints List, issued once yearly to provide a bibliographic record of the items excluded from the Monthly Catalog, is now under consideration.

Disposition of Surplus Materials

During 1968-69 the Exchange and Gift Division conducted a thorough analysis of all procedures relating to the disposition of surplus materials, one of the key functions of the Division. Recommendations were made to regularize and clarify these procedures, in accordance with the laws governing the disposition of surplus Government property, and to assure equitable arrangements for interested and properly qualified individuals to examine and select from these materials. These recommendations were put into effect immediately after approval.

Cataloging

Despite the reductions in staff of the cataloging divisions as a result of the cutback in the request for funds for Title II-C of the Higher Education Act, descriptive cataloging production is still running ahead of the corresponding period in 1968 while subject cataloging production has increased sharply as a result of the discontinuation of the subject cataloging of American dissertations for Dissertation Abstracts. The tight fiscal situation, however, has had its effect in the shelflisting operation with the result that much of the increase in cataloging production has become backlogged at the shelflisting stage.

The scope of the languages covered by the Library's cataloging program has been considerably broadened by the inclusion of at least some cataloging in 19 of the languages of Africa. No large amount of African cataloging is possible at present, but when resources permit the program will be extended. New ground was also broken by the cataloging of titles in Armenian and Sinhalese.

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The hope that top priority material could, through the revised priority system described in the June report, be moved with much greater rapidity so that cards could be issued more promptly has so far not been realized. Shortages in top cataloging staff that clear completed work for forwarding to the next stage in cataloging, combined with accumulations of severe backlogs in the card printing operation, continue to make the accomplishment of this objective elusive. Nevertheless, good progress in certain areas has been made, better controls to monitor the situation are now available, and we are confident that continued effort will eventually bring success.

Work continues on the problem of providing satisfactory cataloging rules for the non-book materials. At the midwinter meeting of ALA the Library will participate in an institute on Systems and Standards for the Bibliographic Control of Media and will work with both the ALA and the Canadian Library Association committees on cataloging rules to try to find solutions to some problems that still remain. A draft MARC format for audiovisual media has been prepared and will soon be discussed by representatives from DAVI, the National Audiovisual Center, and the National Information Center for Educational Media (NICEM).

The Library has decided that its role in cataloging audio-visual material will be confined to motion pictures and filmstrips. The bibliographic control of other AV media will have to be assumed by other organizations that are actively concerned with these materials and that have the special expertise that is required.

Classification Schedules

In September the classification schedule KF for the law of the United States, the first chapter of Class K (Law) to reach the stage of completion, was published. The schedule begins with provisions for the common law of the United States and Federal statutory and regulatory law (KF), followed by the classification scheme for the States. It consists of separate schedules for the law of California (KFC1-1199) and that of New York (KFN5001-6199) and a uniform 600-number table for the law of the other States and territories, as well as a schedule (KFX) for the law of U. S. cities. Since March 1967, Schedule KF, which is for sale by the Card Division for $5, has been applied to newly cataloged law material and to reclassified holdings of LC's Law Library in the field of United States law.

The preliminary groundwork necessary for the preparation of the notation for Subclass KE (English law), consisting of the identification of classes and topics represented in LC's collections and the relative number of titles in the various classes, has been completed. High priority has been given to the preparation of an outline of the notation for the various subclasses of Class K as a whole and to the preliminary groundwork for developing Subclass K

(philosophy of law and jurisprudence, comparative law, international legislation, and other general topics).

A further segment of the Library's KF shelflist in 3 x 5 electrostatic print form became available from the Photoduplication Service during the year, work on a revised edition of Class N (Fine Arts) and on new editions of classes T (Technology) and Q (Science) are proceeding towards expected publication in 1970, and a new cardboard display chart outlining the LC classification system has been published.

Subject Headings

After more than a year of planning and development, Subject Headings for Children's Literature, available from the Card Division for 75 cents, was published in October. It details principles of application, provides a list of headings that vary from those for adult literature, and is designed as an aid to users of LC annotated cards for children's literature and for librarians involved in cataloging children's material and maintaining children's catalogs. Additions to and changes in the list will be incorporated in revised editions, which will be published at irregular intervals.

Cataloging Instruction

The Cataloging Instruction Office, originally set up to provide the training required to develop promising subprofessional employees into full-fledged catalogers, has continued to expand the scope of its activities into new fields of training. Two new courses have been developed to meet the needs of subprofessional staff who search the catalog with only a catalog entry or a citation in hand. One of these was offered for searchers in the Catalog Publications Section of the Catalog Maintenance and Catalog Publication Division; the other for assistants from the Exchange and Gift Division, the Order Division, and the Photoduplication Service. Another new course, in basic cataloging, is now in progress for 38 subprofessional assistants from the Shared Cataloging Division.

Card Distribution Service

For a number of months subscribers to the Library's printed catalog card service have encountered great delay in obtaining cards from the Card Division. The reasons for this and the steps being taken to remedy the situation are described in Cataloging Service Bulletin 87, which appears as an appendix to this report. Essentially, an immediate solution to the present crisis is being sought through a massive reprinting program for out-of-stock cards, beginning with those for 1969. Once the 1969 cards are available, those for 1968 will be restocked, and so on. Data obtained from the Phase I automation equipment will play an essential role in this

effort, particularly as the reprinting program gains momentum. A longer-range solution lies in the Library's commitment to Phase II of the Card Division automation program, described below.

Card Division Mechanization Project

As reported in June 1969, the Library received formal approval from the Congressional Joint Committee on Printing in May 1969 to proceed with acquisition of the equipment needed to implement Phase II of "CARDS," the Card Automated Reproduction and Distribution System in the Card Division. Phase II is the part of the system which reproduces cards automatically, on demand, from MARC records, using a Spectra 70 computer, two Videocomp photocomposition machines, automatic offset presses, and specially designed cutting, collating, and packaging machines (a description of this part of the system appeared in the June 1968 report to ARL). The initial implementation of Phase II is expected late in calendar 1970 or early in 1971; as explained in the last report to ARL, however, full implementation will depend on conversion to MARC format of those records for which cards are being ordered. During the interim between initial and full implementation, some orders will be processed on the Phase I system and others will be filled using Phase II.

Machine-readable Order Slips for Cards

By the fall of 1969 some 75 percent of all card orders were being received on the new machine-readable order forms; but as long as 25 percent still came on the older yellow slips, it was necessary for the Card Division to maintain dual processing procedures. In December 1969, it was announced that yellow order slips would no longer be accepted by the Card Division after March 1, 1970.

To assist libraries whose internal procedures are not satisfied by the single-part order form provided by the Card Division, the Division encouraged as many library supply houses as possible to create multiple-part order forms which could be used to order LC cards in a machine-readable format. At present it is known that such multiple-part forms are available from DEMCO, Gaylord, and the Fordham Equipment Company.

Standard Book Numbers on LC Printed Cards

The Standard Book Number (SBN) is now printed on LC catalog cards for those titles to which such numbers have been assigned by the publisher. The SBN appears flush left below the call number. Future automation plans in the Card Division call for the use of both the SBN and the LC card number as valid order data, the two systems being used together because of the absence of Standard Book Numbers for earlier publications.

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Cataloging-in-Source

With the assistance of Verner W. Clapp of the Council on Library Resources, the Library is investigating the possibility of a resumption of the cataloging-in-source program. Discussions with the American Book Publishers Council suggest that the situation has changed since the experiment of a decade ago and that a sufficient number of publishers are now prepared to cooperate in a modified program. Present thinking is that they would be supplied with a manuscript or typed cataloging information card rather than a GPO-produced printed card. The emphasis in the data supplied would be on the intellectual elements involved, particularly main tentry, added entries, LC and DC classification numbers, LC subject headings, and cross-reference structure. Libraries could fill in title, imprint and date from the title page and ascertain for themselves the collation. The program would concentrate initially on U. S. trade imprints and an effort would be made to work from galleys rather than from final page proofs. It has been tentatively suggested that publishers might print the LC cataloging information on the verso of the dust jacket. This would avoid perpetuating errors, bypass objections on esthetic grounds, and permit cutting out the entry without damage to the book itself. This possibility and many other procedural details will be explored during the course of the Library's investigation.

Closing of the Annex Catalog

For a variety of reasons no additional cards have been filed into the public catalog in the Annex Building, nor are changes in bibliographic information reflected in its entries since July 1969. This catalog, although incomplete, will continue to be housed in its present location and will be available for public use. Sets of the various book catalogs covering the whole range of Library of Congress printed cards are available in the Annex Catalog Room for reference purposes and as supplements to the incomplete card catalog.

Symbols of American Libraries

A directory of identification symbols for libraries in the United States and Canada, entitled Symbols of American Libraries, was published in the fall of 1969. The new work supersedes the ninth edition of Symbols Used in the National Union Catalog of the Library of Congress and includes well over a thousand new symbols. It was prepared in the Union Catalog Division and was printed by the GPO using the Linotron 1010. Copies are for sale by the Card Division for $1 postpaid.

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National Union Catalog, 1963-67

Completion of the 1963-67 cumulation of The National Union Catalog was a major achievement of 1969. This 5-year catalog consists of 72 volumes containing 49,304 pages and includes cumulations of the Register of Additional Locations and the Library of Congress Catalog--Music and Phonorecords and Motion Pictures and Filmstrips.

The quinquennial issue of The National Union Catalog--Author List is itself complete in 59 volumes containing 38,747 pages. It includes a total of 1,320,798 catalog entries and references for 930,593 publications.

The Register of Additional Locations, 1963-67 supplements both the 1958-62 and 1963-67 cumulations of The National Union Catalog. It contains a total of 5,221,326 locations for 812,249 of the post-1955 publications represented by catalog entries in The National Union Catalog since it began publication in 1956. This cumulative issue comprises 6,587 pages and is published as volumes 60-67 of the quinquennial set. It replaces the 1965 and 1966 annual cumulations of the Register.

The Library of Congress Catalog--Music and Phonorecords, 1963-67 consists of 2,567 pages in 3 volumes. Volumes 1 and 2 comprise an author and added entry catalog of music in the broadest sense, i.e., literature on music and other related materials, as well as music scores. It also includes entries for musical and non-musical phonorecords. Volume 3 consists of a Subject Index to the catalog.

The Library of Congress Catalog--Motion Pictures and Filmstrips, 1963-67, is published in 2 volumes, totaling 1,403 pages. Volume 1, Titles, contains the full catalog entries, together with appropriate added entry references, while volume 2 is its Subject Index.

Early in the fall the complete sets were distributed to subscribers by J. W. Edwards Publisher, Inc.

Books: Subjects, 1965-1969

On June 19, 1969 the contract for the publication of the 1965-69 issue of The Library of Congress Catalog--Books: Subjects was awarded to J. W. Edwards Publisher, Inc. This issue will include approximately 27,000 pages in 42 volumes. It will be for sale by J. W. Edwards at $445 per set. To date, over 800,000 cards, of an estimated 1.7 million have been filed. Filing is already completed in some earlier letters of the alphabet (A-D). Editorial revision of the trays began on December 9, 1969. Editing and preparation of camera copy will be completed before the end of 1970, with delivery of copies to subscribers expected early in the calendar year 1971.

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New Serial Titles

The number of new titles listed in New Serial Titles rose to a total of 210,000. This number, achieved in the 16th year of NST, exceeds the number listed in the third edition of the Union List of Serials (1665-1949) and its two companion volumes, International Congresses and Conferences (1840-1937) and the List of Serial Publications of Foreign Governments (1815-1931).

Publication of the Pre-1956 National Union Catalog

Editorial conversion of the card files of the National Union Catalog into a bibliography in book form continues. Despite difficulties in recruiting additional qualified personnel, now partially overcome, by the end of December 1969 shipments 26 through 54 had been sent to London, adding 820,714 edited cards to the previous total of 711,052, for a grand total of 1,531,766. This represents material for more than 76 volumes, of which 60 have been printed and 45 have been distributed by Mansell Information/Publishing Ltd.

Automation

MARC

The MARC Distribution Service, which began in the spring of 1969, is now providing to 75 subscribers bibliographic records in machine-readable form on a weekly basis for all English language monographs currently cataloged at the Library of Congress. The MARC data base at present contains over 34,000 records. During the summer of 1969, the method of input for MARC records was changed from paper-tape typewriters to magnetic-tape inscribers and the system was improved in other ways.

MARC formats for maps and serials have been completed, and work has begun on a format for motion pictures and filmstrips. The map format will be published in 1970. In August 1969 the Library issued a limited number of copies of the serials format as a working document under the title "Serials: A MARC Format." Copies are no longer available, but plans have been made to have this printed by the Government Printing Office and sold through the Superintendent of Documents.

LC has been developing a format-recognition program that enables the computer to assign tags, indicators, subfield codes, and fixed fields in MARC records to relieve editors of routine decisions. Preliminary tests show that most MARC records could be completely processed by machine. The format recognition algorithms have been completed, have been reviewed, and are being manually tested on actual data before coding is begun. Format recognition is being developed for use with both current MARC records and retrospective catalog records.

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The proposed library print train, which was developed by LC and a working committee of the Information Science and Automation Division of the American Library Association, has been adopted as a library standard by the ISAD board. The characters in the standard library print train are a subset of the standard library character set adopted by ISAD in June 1968. This print train will contain 162 unique characters.

On the international scene, the British National Bibliography has initiated a UK/MARC Project using the MARC monograph format to develop a data base to produce its bibliography and to distribute tapes in Great Britain. A representative from the BNB met with LC staff members to eliminate minor differences between the two formats; proposals are now undergoing further analysis at LC and in Great Britain. The MARC format has been translated into French, and LC has been working closely with a staff member from the Library of the University of Grenoble who is planning a MARC project for France. Representatives of LC also participated in the sessions of the International Meeting of Cataloging Experts Working Party on Standardized Descriptions of Bibliographic Entries; this preceded the Copenhagen conference of IFLA, where MARC was also widely discussed. The MARC format continues to have great influence in the critical area of standardizing bibliographic data and the recommendations of the Working Party will facilitate the exchange of machine-readable data on an international level.

RECON

The final report of the RECON Working Task Force, Conversion of Retrospective Catalog Records to Machine-Readable Form: A Study of the Feasibility of a National Bibliographic Service, was published in late June 1969 and is for sale by the Superintendent of Documents at $2.25 a copy. Its recommendations were the basis for the establishment of the Retrospective Conversion (RECON) Pilot Project in LC to convert retrospective cataloging records to the MARC format.

Among the recommendations of the RECON Working Task Force was that of conversion, in reverse chronological order, while experimenting with older cataloging records and determining the best method of retrospective conversion. By beginning the RECON Pilot Project with the conversion of those cataloging records for English language monographs for 1969 and 1968 which have not been included in the MARC Distribution Service, the RECON Pilot Project, together with the current MARC Distribution Service, will result in the creation of a definable data base of all 1969 and 1968 English language monographs. This follows a second recommendation of the RECON Working Task Force, i.e., no retrospective conversion should take place until that language category (or type of material) is covered by the current MARC Distribution Service.

The second purpose of the pilot project is to experiment with cataloging records for monographs in other Roman alphabet languages and with records for older English language monographs. Various forms of inputting techniques and devices will also be tested.

In addition to staff, space, and administrative support being contributed by LC to the RECON Pilot Project, developmental efforts directed toward automatic format recognition for current, retrospective, and MARC I cataloging records, and hardware/software specifications for the Card Division Mechanization Project will be closely related to work on RECON. Other experimental aspects of the project include investigation and experimentation with various methods of microfilming and producing hard copy from the LC record set and continued monitoring of direct-read optical character recognition devices and other input devices for large-scale conversion. Efficiency and cost results from this work will be criteria for planning large-scale conversion efforts.

Editors for the RECON Pilot Project have been hired and trained and are now editing records obtained directly from Card Division stock for RECON input. These records have been checked against a print index of card numbers for records in the MARC data base to determine that the RECON titles to be processed are not already in machine-readable form.

The first meeting of the RECON Advisory Committee and the Working Task Force was held at the Library of Congress in September 1969. At that time, the project director summarized the progress of RECON and related automation activities at LC and identified the important research tasks included in the Project. These tasks involve issues that relate to problems of national scope and should be considered at this time in order to lay the groundwork for a future national network of libraries. Work has begun on a study of levels of completeness of MARC records and the implications for a cohesive library system.

The Library received an officer's grant of $25,000 in August 1969 from the Council on Library Resources, Inc., to implement the first phase of the project. In December 1969, the Library received the full grant from the Council of $226,000, which included the sum of the officer's grant to carry the pilot project through August 1971.

Central Bibliographic System (CBS)

During the past 6 months, increased attention has been given to development and implementation activities. In general, the approach involves the introduction of test case automation applications in controlled areas of LC, as exemplified by the Order Division project described below. The designs and techniques demonstrated successfully in these applications will be extended to larger, more comprehensive areas of the Library, such as to additional sources of acquisition and to additional control-of-material functions.

Ultimately, these automated operations will be consolidated into integrated automation operations.

The CBS terminal study, which was previously reported as being concerned with the unique requirements of the Library, has resulted in preliminary findings by the contractor. Terminal specifications for various functions have been defined and are being used by the contractor to determine what terminals are now commercially available. The studies, to be concluded early in the calendar year 1970, will show how the state-of-art is advancing to meet the needs of LC's automation program.

The design study undertaken by contract is progressing to the point of defining files and file use in the projected system. Patterns of use have been determined and file sizes have been identified for use in models that will derive basic file designs and test them by means of computer simulations. Work is going forward to enable the models, which have been successfully used in commercial applications, to accept bibliographic records and procedures. As anticipated, library work presents more complex interaction problems than have been encountered in industry. The results will be file organization recommendations which will be related to various operating systems now available from manufacturers and software designers.

A draft of the design for the automation project of the Order Division was completed in August and was approved shortly thereafter. Development efforts toward implementing the automated system have begun. The system--in addition to assisting such Order Division operations as preparing purchase orders, payment documents, claiming notices, and various other reports--will contribute to an automated process information file concept and will enable various in-process record conversion concepts to be explored.

Subject Headings

The printed seventh edition of the Library of Congress list of subject headings includes subject headings established and applied by LC from 1897 to 1964. This list was printed from machine-readable copy by the Government Printing Office. Since that time, 1965, 1966, 1967, and 1968 supplements, containing additions to, corrections of, and deletions from the master list, have been published and have also been converted to machine-readable form. The 1965 supplement has been merged into the master file and the remaining supplements will be merged in the near future. The procedures and computer programs by the GPO were designed principally to produce printed output by means of Linofilm. Publishing the document again brings up one of the most difficult problems in library automation, the problem of file arrangement. To update the file, the GPO maintained the prescribed sequence with a unique number posted to each entry in the master list, and an interpolation was made by hand to file the added subject heading in its correct position. This places an undue

burden on the human editors. Since a term may appear in many places in the list and since the list includes cross-references to other terms, a correction must be posted each time the term occurs. Work is in progress to arrive at a solution to the problem of efficient maintenance. It should be noted that when completed the file structure will utilize MARC system software and will be available in machine-readable form in a MARC format.

Legislative Reference Service

The Library's Selective Dissemination of Information (SDI) system has been expanded to include all professional researchers in the Legislative Reference Service and a limited number of Congressional users. This is the service whereby each user is provided with a weekly listing of citations of serial articles, Congressional and other publications, monographs, etc., received the week before that match his individual interest profile. This SDI service is to be further extended during 1970 to include Congressional committees.

A Personalized Reference Service has also been instituted to supplement the SDI service. With this service, the LRS researcher may select on a continuing basis those citations from his SDI listings that he considers of continuing importance to his research. Periodically he is presented with a personalized, sorted compilation of the citations he has chosen.

The Banking and Currency Committee and the Judiciary Committee of the House of Representatives are now generating and maintaining their committee calendars by means of terminals tied into LC's Administrative Terminal System (ATS). In the past, printed output from this system has been accomplished directly on the terminals used for input. A program now written provides for printing on the high-speed printer to increase speed and improve quality. This capability has been made available to the committees and to other users of LC's ATS.

The terminals in place are also being used as a communications network to handle rush Congressional inquiries received by the LRS. Each inquiry is promptly transmitted directly to a terminal located in the division where the research is to be performed. This on-line network has greatly enhanced the speed and efficiency of this process.

Progress is being made toward the goal of an on-line retrieval capability. The first version of the retrieval language has been completed and programs have been written to transform unstructured data of the Digest of Public General Bills and Resolutions and the Legislative Status Report into structured automated files.

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Other Computer Applications

Automated systems for the control of cataloging have been designed for the Geography and Map Division's single sheet maps, the Manuscript Division's collections, the Science Reading Room's collection, the National Referral Center's request-actions and resource-information files, and the files of the Cold Regions Bibliography Section. These systems are in the final stages of implementation and are scheduled to be operational during the first half of calendar 1970.

Advances are being made in utilizing computer aids to publication. In addition to increased use of the high-speed printer mentioned above, a generalized computer program is being written to convert MARC records to a form which can drive photocomposition devices.

Copyright Office Automation Project

The Copyright Office has maintained records separate from those of traditional library operations. These files serve primarily a legal, rather than a bibliographic function. Because of the difference in requirements, automation in the Copyright Office is outside the Central Bibliographic System but within the automation structure of the Library. Automation of copyright operations recognized that, whereas a manual system may require a record separate from that of bibliographic records, automation may require that the logical records be interdependent.

The primary goal of the current Copyright Office automation project is the design and implementation of an automated information system which would facilitate recording every application, item, and fee received by the Copyright Office and would efficiently match, add to, sort, file, locate, and search this material while it is in process in the Office. Secondary implications of the primary mission are far reaching, however, and greatly increase the magnitude and scope of the study and analysis necessary to the success of this initial systems effort. The relationship of the fiscal and control information in this initial accounting and in-process control system must be related to the flow and control of documents throughout the Office. Moreover, the relationship of automation projects in the Office to the Library's overall automation plans and presently on-going automated information systems must be recognized. The achievement of an operationally successful automated in-process and accounting information system requires three levels of concurrent study and design: 1) the study and general design of an automated information system for the entire information flow of the Copyright Office; 2) the detailed analysis and preparation of systems specifications for the first components of the Office's automated information system; and 3) the formulation of objectives to be served by the newly designed system and the detailed management information necessary to control the manual and mechanized flow of documents and items.

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Technical Processes Research Office Activities

The Technical Processes Research Office (TPR) continued its investigations of the relative specificity and expressiveness of classification numbers and subject headings and the extent to which they complement each other. A detailed analysis of the relationship among LC classification numbers, Dewey Decimal numbers, and LC subject headings for the same bibliographic items was well under way by the end of the year. Much of the data for the study was taken from a sample of LC catalog cards covering all languages, but additional data will be obtained from machine analyses of the MARC data base of English language publications.

Another facet of the overall study involves examination of the relationship between headings and class numbers in the machine-readable record of the LC subject heading list (7th edition and 1964-65 supplement). This examination will be made from a computer printout of the class numbers and their associated headings.

Data from the machine file are being processed also to facilitate comparison between the LC list and the National Agricultural Library's Agricultural/Biological Vocabulary. A program has been written to convert LC cross-reference designations to those used in the NAL list. It will be used to process a representative section of the LC list to test the feasibility of automatic merging or matching of the two vocabularies.

A sample of 2,760 records was drawn for the study of LC name authority records and they were analyzed and edited for machine input for this type of record. Keying of the data was scheduled to begin early in January. When the data are in machine-readable form, they will be processed by GENESIS (Generalized Statistical Program), a MARC program that can tabulate the occurrence of any element in a record. Preliminary results of the subsequent statistical analysis will indicate whether additional subsamples will be needed to determine characteristics of particular kinds of name authority records. The findings of the study will provide basic information about the file requirements for name authority records and their potential in a computer environment.

U. S. National Libraries Task Force on Automation and Other Cooperative Services

From July 1969 to date the U. S. National Libraries Task Force has given a high portion of its attention to the national serials problem and to systems design. Following the submission by LC of the report on Phase I of the National Serials Data Project, which described data elements for serials, the Task Force proposed detailed recommendations to the directors of the three national libraries concerning the establishment of a national

serials system. In response to a directive from the three directors, the Task Force developed plans for a National Serials Pilot Project as a beginning step leading to a National Serials System. In September 1969 the National Agricultural Library, on behalf of the Task Force, announced a grant to the Association of Research Libraries to launch the pilot project. This effort, which will involve the MARC serials format developed in Phase I, will include the conduct of experimental research aiming toward the development of a machine-readable file of titles of live serials in science and technology held by the three national libraries; the production of preliminary lists including a union list and such other lists as may be of interest to the directors of the three national libraries; and the production of reports relating to problems encountered, solutions found, other information regarding the universe of serials, and recommendations for continued serials work at the national level and serials programs of interest to the total research community.

In September 1969 the Task Force submitted to the directors a comprehensive report on studies concerning the National Libraries System. Proceeding on the premise that the three national libraries will continue to automate their individual library processes, the Task Force has focused attention on designating points in these three systems where connecting links can be provided to assure compatibility, provide opportunity for exchange of data, and eliminate nonessential duplication of work. In-depth studies are underway in acquisitions procedures.

Studies are underway also in standardized controls over technical report literature, compatibility in subject headings, and the complex problem of filing rules. A recommendation for cooperation in use of photocopies in lieu of loans of original library materials among the three national libraries resulted in establishment of a suitable mechanism for this purpose.

Activities of the Science and Technology Division

The major emphasis in the activities of the Science and Technology Division, which has for the past 2 years incorporated the National Referral Center for Science and Technology, continued to be the improvement of its broad range of reference, referral, and bibliographic services to the scientific community, government agencies, and the public. Its most recent publications include Air Force Scientific and Research Bibliography, Vol. VI; a final installment contributed to Aerospace Medicine and Biology; A Continuing Bibliography, NASA SP-7011; UFOs and Related Subjects: An Annotated Bibliography, AFOSR 68-1656; and the National Referral Center's fifth volume, A Directory of Information Resources in the United States: General Toxicology, which was sponsored by the National Library of Medicine and which came off the press in mid-December. Expected to appear within a few weeks is COSATI Directory of Federally Supported Information Analysis Centers, compiled in the division.

The division's automation activities include five distinct applications of data processing technology to bibliographic and other procedures. Three of these as reported above are adaptations of MARC to produce, respectively, book catalogs for the Science Reading Room (Project START), a family of abstract bulletins for the U. S. Army Cold Regions Research and Engineering Laboratory (CRREL), and a format for continuing comprehensive bibliographies using the Air Force Scientific Research Bibliography as the design prototype. The two others are a division Personnel Management Reporting System and the IRIS-AEGIS system complex used in support of the register and directory activities of the National Referral Center. (The acronym IRIS stands for Information Resources Information System, while AEGIS is a program package--An Existing Generalized Information System--produced by Programmatics, Inc.) The most interesting and significant feature of the co-called "CRREL" and "AFOSR" systems is that they extend the MARC II bibliographic format to accommodate technical reports and journal articles as distinct from the earlier applications to monographs and serial titles as in Project START. The serials aspect of Project START and related division activities involving the recording and use of bibliographic data on serials is being carefully coordinated with other efforts inside and outside LC to test the recently developed MARC serials format in a variety of "real-life" situations or pilot projects of practical relevance to the eventual establishment of a National Serials Data Program.

Service to the Blind and Physically Handicapped

The number of blind and physically handicapped readers served directly by the division's programs now total more than 165,000. These readers are served through the Division for the Blind and Physically Handicapped in Washington and the regional libraries, which now total 43.

The use of prerecorded tape cassettes of the Phillips type is now reasonably well accepted, although the sources for producing such cassettes on the scale needed in the program are limited. Additional manufacturers are being sought. Similarly, the tape cassette playback machines are finding acceptance by users, and 10,000 units were distributed in the past 6 months. Further testing of a reasonably priced, technically advanced machine is planned in fiscal year 1970 before launching a full-scale tape cassette program.

More extensive use of thin, plastic, expendable, low-cost discs for current talking-book magazines is being considered, and improved packaging for the mailing of recordings is being tested. In the braille field, the use of computers to produce reading materials is being explored. Special attention is being given to the reading needs of students and of the elderly, since both groups are faced with problems that are not shared with the majority of readers.

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Establishment of Environmental Policy Division in LRS

Expanding Congressional concern for the quality and productivity of the Nation's environment has led to the establishment of a new research unit--the Environmental Policy Division--in the Legislative Reference Service. Organized in September 1969, the Division is headed by Richard A. Carpenter, who until that time had been Senior Specialist in Science and Technology and Assistant Chief of the LRS Science Policy Research Division. The Environmental Policy Division comprises all the former Natural Resources Division staff as well as subject specialists from several other units of the Service.

Concentration of additional staff in this new organization will enhance the Service's capacity to treat in comprehensive fashion public policy problems relating to natural resource management, agriculture and conservation, recreational resources planning, air and water pollution, and other issues emerging in the broad area of environmental policy. The increase in the volume of research work in the field has been in part the result of the sharp rise in the number of Congressional hearings held since 1965 on a variety of environmental affairs topics. The institution of the President's Environmental Quality Council, reflecting concentrated public interest in proper management of our natural resources, has dramatically multiplied Congressional requirements for authoritative and objective policy and program analysis, particularly with regard to the analysis and evaluation of various legislative proposals.

Cooperative National Film Program

In mid-summer, the cooperative acquisition activity of the Library and the American Film Institute resulted in a great number of motion pictures arriving at the Library's film vaults near Washington. Many of the new arrivals came from private and previously uncataloged collections; consequently, much effort has been devoted to the identification of this material and the preparation of records on it. During the summer months temporary help was added to the Library's regular staff to prepare film for laboratory copying operations and to prepare the film vaults for the receipt of films.

The need for storage space of incoming nitrate material led the Library to assume control of 36 well equipped nitrate vaults at Wright-Patterson Air Force Base in July 1969. A limited staff was added to provide supervision and control of this space, and initial shipments of film were made. More film will be transferred soon to make space for new acquisitions in the Library's Washington-area film vaults. In anticipation of the large amounts of film to be donated or deposited by United Artists, Columbia Pictures, and Mary Pickford, as well as the purchase of acetate material from other producers and archives, the Library has requested that it be assigned the entire available vault space at the Wright-Patterson facility. And, as mentioned above in the section on preservation, additional steps to preserve this film have been taken.

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Center for the Coordination of Foreign Manuscript Copying

The preliminary study on "The Impact of the American Revolution Abroad," a project recommended by the advisory committee on this program, has progressed to the point where estimates regarding costs and time are possible. A cooperative microfilm project in the Austrian State Archives has been submitted to several university libraries. The Fall 1969 issue of News from the Center is devoted to France and contains several articles by French historians and archivists.

Presidential Papers Program

The microfilm edition of the Theodore Roosevelt Papers, a 485-reel publication reproducing 248,000 items, is scheduled for release early in 1970 and will have an accompanying three-volume index of approximately 1,300 pages. It will be followed shortly by the William Howard Taft Papers on 658 reels; this microfilm publication will have a five-volume index to guide researchers through 26 series of papers containing approximately 500,000 manuscripts. There publications will make available to researchers 20 collections on 2,291 reels of microfilm at a total cost of approximately $25,000. By the end of 1971 film and indexes of the remaining three Presidential collections in the series--Wilson, Garfield, and Jefferson--should be available.

At the present time 49 libraries or archival repositories in the United States have all or virtually all of the film editions produced, and Presidential Papers microfilm publications can now be found in 46 of the 50 States and in several foreign countries.

American Revolution Bicentennial Program

With funds appropriated by the Congress, LC has assembled a special staff of professional historians headed by Robert A. Rutland, author of The Birth of the Bill of Rights, George Mason, Reluctant Statesman, and Ordeal of the Constitution, and editor of The Papers of George Mason, to work with other LC staff on the Library's American Revolution Bicentennial Program. Ten leading historians who are specialists in early American history were appointed by the Librarian of Congress to serve as an advisory committee for this program, which is under the general direction of the Assistant Librarian of Congress. They are John R. Alden, Whitfield J. Bell, Jr., Julian P. Boyd, Lyman H. Butterfield, Jack P. Greene, Aubrey C. Land, Merrill Jensen, Adrienne Koch, Edmund S. Morgan, and Richard B. Morris.

Members of the Library's American Revolution Bicentennial Office and of other divisions described projects already undertaken or proposed for future accomplishment to eight members of the Advisory Committee meeting in Washington on January 12. All current

projects under way gained strong endorsement, especially one to which the Library has given highest priority--the preparation of a comprehensive guide to LC's original sources on the American Revolution, the life and times, and contemporary printed materials of other kinds. The committee passed a resolution calling on the national American Revolution Bicentennial Commission to urge the several States to undertake similar projects. The committee felt that this work in the States could be a most important undertaking for the national commission to encourage and should be considered before the drafting of the commission's report to the President, due on July 4, 1970.

Among other LC projects approved were the preparation of bibliographies of secondary works; the publication of facsimiles of engravings, broadsides, and significant documents of interest to the scholar and to the general public; the presentation of exhibits, including traveling exhibits; and the preparation of teaching aids. The Board expressed satisfaction that the Library's prize-winning Quarterly Journal would carry articles on the Revolution.

Given strong endorsement and high priority was the preparation of a supplement to Edmund C. Burnett's Letters of Members of the Continental Congress, with Paul H. Smith of LC's American Revolution Bicentennial Office as editor. Since 1936--when Burnett completed his 15-year, 8-volume work, published by the Carnegie Institution of Washington--additional letters have come to light and deficiencies (in the light of present documentary-publication standards) have been discovered. Burnett printed 6,138 letters for the period 1774-1789; Dr. Smith believes that the proposed supplement will include at least 1,200 more letters.

The committee approved the Library's plan to produce a series of pamphlet reprints, urging that concentration be on English pre-1776 and American post-1776 pamphlets and that these publication plans be coordinated with other research institutions. It also endorsed the publication of a series of edited diaries and private journals, valuable for an understanding of the life and times of the average American who lived through the war years, an atlas of the American Revolution, catalogs of rare maps in LC's collections, and, if funds are found to support such activities, symposia focusing attention on the latest scholarly research on the Revolution and on LC's unique source materials.

Photoduplication Service

The Photoduplication Service continues to microfilm current files of more than 1,000 newspapers, periodicals and government publications for preservation purposes, as well as to make these titles more accessible to libraries and scholars throughout the world. Significant noncurrent files have also been microfilmed

and their availability has been announced in a series of circular letters sent to ARL and other selected libraries. Among the important files recently completed were the newspaper El Sol; diario independiente [Madrid] for the period June 1, 1922 - November 2, 1936; the Theatrum europaeum (Frankfurt), a richly illustrated German chronicle published during the period 1617-1718; Il Mondo [Rome] for the years 1949-65; and finally, a list of back files of 12 domestic and 6 foreign newspapers totaling 1,593 reels. In cooperation with the Committee on Applied Geography of the Pan American Institute of Geography and History, the Photoduplication Service is conducting a cooperative project to microfilm more than 100 Guatemalan and Honduran statistical publications.

An average of more than 300 pieces of correspondence are received in the Photoduplication Service each work day and every effort is made to expedite orders and requests for estimates. Libraries are urged to give as complete citations as possible, to authorize photocopying rather than making a request for a cost estimate, if the cost will not exceed $10 and to open deposit accounts if they have not already done so.

Phases I-IX of the project to microfilm the bills and resolutions of the U. S. Senate and House of Representatives from the 1st through the 55th Congress (1789-1899) have been completed. Phase X for the 56th-62nd Congress (1899-1913) will be completed early in 1970 and filming will commence on Phase XI for the 63rd-66th Congress (1913-1921). Libraries interested should request Photoduplication Service Circular C-121 (rev).

The microfilming in New Delhi of current issues of more than 140 gazettes, newspapers and periodicals published in India, Pakistan, Ceylon, and Nepal has been completed through the second quarter of calendar year 1969; filming of the issues for the third quarter is in progress. Subscription rates and titles for newspapers and periodicals filmed in Delhi are contained in PL-480 Newsletter No. 15 (August 1968), and for gazettes, in Newsletter No. 17 (August 1969), available from the Overseas Operations Division.

World List of Future International Meetings

In the report made in June 1969, the Library announced that because funds offered by other Federal agencies were not sufficient to support the continued production at GPO of the World List of Future International Meetings, the Library would ask for bids from commercial publishers. No bids were received, however, and publication of the World List ceased with the September 1969 issue.

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Recent Publications

Among recent publications of the Library are: Louisa May Alcott; Folklore of the North American Indians; Children and Poetry, the 1969 issue of Children's Books; a catalog of the exhibition commemorating the sesquicentennial of Alabama's Statehood; Presidential Inaugurations: A Selected List of References; and the 1968 volume of the National Union Catalog of Manuscript Collections.

L. QUINCY MUMFORD
LIBRARIAN OF CONGRESS

January 15, 1970

APPENDIX S

THE LIBRARY OF CONGRESS—PROCESSING DEPARTMENT

CATALOGING SERVICE

BULLETIN 87 WASHINGTON, D. C. 20540 JANUARY 1970

CARD DISTRIBUTION SERVICE

For a number of months subscribers to the Library's printed catalog card service have encountered great delay in obtaining cards from the Card Division. It is the purpose of this Bulletin to state the reasons for this regrettable situation and to indicate what may be expected from the Card Division during the coming months. The difficulties encountered by management in the Card Division defy a simple explanation but, essentially, the present situation has developed with increasing momentum over the past three years as a result of lack of space to maintain an inventory of card stock adequate to fill a sufficiently high percentage of orders received.

In 1966 the Card Division sold 63,214,294 catalog cards; by 1968 the sales figure had jumped to 78,767,377 cards. This tremendous increase over a three-year period nearly exhausted the Library's card stock inventory, and it has been impossible to replenish, with sufficient speed, the card stock necessary to satisfy the number of orders received. In 1967 and 1968, while sales volume reached record proportions, the Card Division also faced the task of printing and adding to stock cards for 307,867 titles cataloged during this two-year period. The figure for 1969 was 203,176, bringing the three-year total to 511,043 cards for currently cataloged materials. This expansion of the number of individual titles to be serviced, resulting from a dramatic increase in cataloging activity at LC, in addition to unprecedented sales volume and severely limited space in which to operate, overburdened the Card Division's ability to maintain an adequate supply of card stock for the over 5,000,000 titles for which printed cards have been prepared during the last 70 years. The difficulty of estimating which of these millions of titles will be in great demand by subscribers and hence must be stocked in large numbers and which will be in relatively little demand added further to the problem.

These problems were not entirely unforeseen, and the Card Division began preparations in 1967 for automating the distribution of printed catalog cards. The first part of this program, the automated processing of order slips (Phase I), became operational on a limited basis in October 1968. The optical character recognition equipment and the related machinery utilized for Phase I enable the Card Division to process and arrange order slips at a pace that far outstrips the older manual system. If card stock is available, orders processed

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Cataloging Service Bulletin 87 January 1970

through Phase I equipment can be filled in seven days. Adequate stock, however, is the key element in the system, and it is to the immediate and to the long-range solution of the stock problem that present efforts are being directed.

An important byproduct of the Phase I system is the information it furnishes on the frequency with which certain titles are ordered. This is the data base from which future stock needs can be accurately projected and existing stock inventory controlled. If the number of times individual titles must be reprinted can be reduced and an adequate supply of card stock can be maintained to meet current needs, the subscriber will receive better and more prompt service.

An immediate solution to the present crisis is being sought through a massive reprinting program for out-of-stock cards. All 1969 cards are now being brought back in stock as a first priority. Once this is accomplished, 1968, 1967, and earlier cards will be brought back in stock through the reprinting program which will operate systematically year by year from the most recent to the older card series. Data generated from the Phase I equipment will play an essential role in this effort, particularly as the reprinting program gains momentum.

Because this essential data is readily available only from orders received on the new machine-readable order slips, and because of the critical situation which now exists in the Card Division, it is necessary to announce the "inevitable" by informing subscribers that the Card Division will accept only machine-readable order slips effective March 1, 1970.

Effective February 1, 1970, all orders received on yellow order slips will be processed against the card inventory and if there is no card stock immediately available, the order slips will be returned to subscribers. By the same token, all yellow order slips now on hand will be similarly processed as reprinting cycles are completed and if no stock is available will be returned.

If subscribers still wish to receive cards for slips which have been returned after February 1, it will be necessary that orders be resubmitted on machine-readable order forms. Single-part order forms are furnished to subscribers free of charge, but for those who prefer to use multiple-part forms, the following companies are known to have these forms available: DEMCO, Fordham Equipment Company, and Gaylord Brothers.

The second stage of the Card Division automation program (Phase II) is now coming off the drawing boards and is scheduled to begin limited operation late in the calendar year 1970 or early in 1971 depending on availability of funds and ability of manufacturers

and contractors to meet target dates. Phase II represents the first step by which cards may be printed on demand in an automated system and will utilize MARC tapes as a data base. Circumstances dictate a strong commitment to this system because manual methods used in the past are inadequate to provide satisfactory service to the library community in the future.

Thus, the problems of inventory and space to house that inventory are being dealt with in terms of both immediate and long-range solutions: immediately through the reprinting and restocking program, and long-range through the Phase II automated system which will print cards on demand. Obviously, curing the present grave situation will take time during which, it is realized, libraries with quantities of books awaiting catalog copy will not receive the kind of full service the Library of Congress would like to give them. However, the reprinting program coupled with greater ability to project stock needs through data generated by Phase I equipment should result in gradually improved service to subscribers. In sum, while no miraculous and instantaneous recovery is possible because of the dimensions of the present crisis, better service over the coming months is in prospect.

The Library of Congress administration and especially the staff of the Card Division realize and regret that the service to card subscribers has deteriorated to its present low level. Every available resource is being devoted to alleviating a situation which is as intolerable to the Library of Congress as it is to card subscribers.

This summary of the situation as it now exists and of the Library's plans and commitments for improving the situation has been prepared in order that card subscribers may know the facts, unpleasant as some of them are, and, more importantly, in order that libraries may have a basis on which to make decisions regarding their own processing procedures during the period that the card distribution service is undergoing program changes aimed at bringing it up to acceptable levels of promptness and efficiency.

APPENDIX T

REPORT OF THE NATIONAL AGRICULTURAL LIBRARY

Introduction

Much of 1969 was occupied in moving the Library into its new quarters and to recover partially from the effects such a major transfer usually produces. However some progress was made in automation plans, network development and international cooperation. Each of these will be described briefly in this report.

New Library Building

During the early part of the year, the Library moved into its new building on the grounds of the Agricultural Research Center, Beltsville, Maryland. The 15-story tower of pre-cast concrete and rock-faced brick houses a collection of over one million volumes on agriculture and supporting sciences. Bookstacks are located in the tower building from the fifth through the thirteenth floors. An adjoining two-story building provides space for technical personnel as well as large public reading rooms. Ample conference room facilities are provided throughout the building including a large assembly hall on the fourteenth floor.

Additional technical information and illustrative materials on the new facility may be obtained on request to the Assistant Director for Program Coordination Services, National Agricultural Library, Beltsville, Maryland 20705.

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Agricultural Sciences Information Network

Work continued under a research grant by the Library to the Interuniversity Communications Council (EDUCOM) for the development of a long-range plan for strengthening information communication and exchange among the libraries of the land-grant institutions and the National Agricultural Library. The final EDUCOM report, "Agricultural Sciences Information Network Development Plan"[1] was issued in August 1969 and covers the essential philosophical concepts, a basic organizational structure, and initial steps for implementation of the network. An invitational conference on the network plan will be held in Washington, D.C., February 10-12, 1970. ARL members who would like to attend or who desire additional information about the conference should contact the Director, NAL.

Library Automation

A major step forward in the Library's automation plans was taken with the completion of a two-year study by Booz-Allen Applied Research, Inc. Their final report, "Design Study for Automated Document Location and Control System", dated December 1968, was issued early in 1969. The report provides a system design for document control within the Library which allows real-time processing to the Library staff and batch-processing to outside users.

The Library awarded a grant of $100,000 to the Association of Research Libraries on behalf of the U. S. National Libraries Task Force on Automation and other Cooperative Services. The purpose of the grant is to conduct a pilot project to produce an automated union list of current scientific and technical serials held by the three national libraries. It is hoped that the project constitutes a logical "next step" in cooperative efforts to build a national data base on serial publications.

[1]Available from the Clearinghouse for Federal Scientific and Technical Information.

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Additional research supported by NAL during the year included studies by Auerbach Corporation on utilization of machine-readable bibliographic data bases. Reports published cover such topics as modes of interaction, vocabulary and format problems, and standardization. A major study of the **Bibliography of Argriculture** was also completed by the Information General Corporation.

International Agricultural Information System

An international system for the collection, analysis, and dissemination of agricultural information came closer to reality as a result of efforts made by Library personnel during the year. Following meetings in Rome in October 1969, the Director-General of the Food and Agriculture Organization of the United Nations (FAO) established a Panel of Experts to advise him on proposed FAO sponsorship of such a program. Members of the Library staff will serve on this group and subsequent study groups engaged in design of the system. A final system plan will be submitted to FAO for consideration in mid-1970.

Conclusions

The continuation of lean budget years constitutes the major problem for NAL management. No increases in program funds were obtained in either 1969 or 1970. While it is too early to predict what funds might become available in fiscal 1971, there is little room for optimism at this point.

Thus it seems clear that the program of national services provided by NAL will have to be re-examined in light of the current fiscal situation. It is quite likely that some curtailment of bibliographic and other reader services will become necessary.

John Sherrod

January 12, 1970

APPENDIX U

REPORT OF THE NATIONAL LIBRARY OF MEDICINE

MEDLARS II

MEDLARS II is planned as an integrated total library system, bringing the full range of traditional library operations under automated control and thus extending the capabilities of the National Library of Medicine's current system, MEDLARS I, which is relatively limited in scope to an information storage, retrieval and publication operation. The MEDLARS II system is being developed in two phases, referred to as the INITIAL and the EXTENDED systems. INITIAL processing is characterized by "batch" computer operation and can be described as having the same capabilities as MEDLARS I but with the addition of an augmented MeSH vocabulary, new equipment, and selected supporting products.

The EXTENDED system will provide the user with on-line access to the computer. This final EXTENDED system will provide for major functional activities to be conducted through the use of remote terminal devices, located internal and external to NLM. These activities include acquisition and ordering, cataloging, interlibrary loan activities and physical location data, vocabulary browsing, search output, and total bibliographic control, as well as extended capabilities for management information.

The INITIAL phase of MEDLARS II will utilize IBM system 360/50 and will operate in the multivariable tasking (MVT) of the Operating System. The equipment configuration includes a central processing unit, I core memory module of 512,000 bytes, large core storage (LCS) of 1,000,000 bytes, four 2314 direct-access storage devices (DASD), four 9-track tape drives, two 7-track tape drives, two printers, and a card reader-punch. The hardware configuration for the EXTENDED phase will be designated as a result of the full system design effort.

The INITIAL system is to be operational by the close of fiscal year 1970, with the EXTENDED system to be implemented approximately one year later.

The major accomplishments in the development of MEDLARS II in the past year have been in the areas of 1) definition of functional requirements, 2) software development, and 3) development of an overall systems design.

Work in the first area--definition of functional requirements--was completed early in the spring of 1969, with the submission of three documents outlining the functional requirements relating to the major activities of the Library--receipt and cataloging; indexing and retrieval of journal article citations; and vocabulary control. These requirement documents then served as a major input for the development of both the software and the overall systems design.

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In the second area mentioned--software development--there have been many important accomplishments. The contractor is presently well into the coding, testing and debugging of specific components required by COSMIS (Computer System for Medical Information Services)--the data management system which they are developing to handle the Library's information processing requirements.

The third area--development of an overall systems design--culminated in the submission to the Library in September 1969 of an Overall Functional Systems Design Specification. The general objectives of this specification were to: 1) provide a response to all stated functional requirements; 2) correlate NLM functional activities with hardware and software design; and 3) serve as a system baseline to define and control the development of the final product, MEDLARS II.

All of the capabilities of MEDLARS I are included in this design, in addition to the expanded MEDLARS II provision, which include:

- a query capability over the entire data base
- on-line access to files
- ADP assistance for indexing, cataloging, and vocabulary control
- maintenance, retrieval, and manipulation of vocabulary
- ADP support for control and administration of the system
- capability of "browsing" in the data base
- format flexibility
- ADP support for receipt activities and for maintenance of the collection

Five functional modules were specified in the design: 1) Receiving and Routing; 2) Cataloging and Indexing; 3) Vocabulary Control; 4) Information Retrieval and Publications; and, 5) Maintenance and Selective Use of the Collection. For each module the design includes a presentation of the scope, purpose, material processed, and module description.

In addition to the activities in the three general areas described above, we have also reached initial agreement on the data elements or fields which are to be included in the MEDLARS II files. The development of file structure is presently underway and conversion programs are currently being specified and implemented. The conversion of the data bases is to take place in February 1970. We also plan for demonstration of various functional capabilities of the INITIAL system early in the spring of 1970, for subsequent operation before the close of fiscal year 1970.

The orderly transition to MEDLARS II is of prime concern to NLM. Currently under development are plans for scheduling discussions and detailed

presentations of the system to members of the library community involved with MEDLARS.

Another area of major importance in the development of MEDLARS II is the assurance of compatibility/convertibility with the Library of Congress's MARC II system. It is a requirement of our system that it be capable of accepting and transmitting information in the MARC II format, although not all of the data elements, indicators, etc. may be used and/or supplied.

Network Operations

Under authorities of the Medical Library Assistance Act, grants have now been approved to institutions in all areas of the United States to act as units of a national system of regional medical libraries.

The original Medical Library Assistance Act of 1965 provided for five-year support of medical library service, not only by the development of regional library programs but also by providing assistance in research and development, improving library resources, construction, and supporting biomedical publications and training. During the year, bills for an extension of the Act were introduced in both houses of Congress.

On July 10, 1969, the House of Representatives passed HR 11702, "Medical Library Assistance Act of 1969," which extends the Act for three years, and authorizes funding in the amount of 21 million dollars for each of the three years.

On October 20, 1969, the Senate passed a bill which was a modified version of the bill passed by the House. Its proposed title is "Medical Libraries and Health Communications Assistance Amendment of 1969." The Act would extend for three years. It provides for funding increases during each of the three years to a final level of 35 million dollars, and provides for changes in authorization for extramural support programs.

As of the end of November 1969, the House and Senate conferees had not yet been appointed, but it is anticipated that an agreed upon version of the bill will have been signed into law before the end of January 1970.

In the development of a regional library program, a total of eleven regional medical libraries have been designated; those already in operation are:

Francis A. Countway Library of Medicine, Boston, (New England)
College of Physicians of Philadelphia (Mid-Eastern)
Wayne State University, Detroit, (East Central)
The John Crerar Library, Chicago, (Midwest)

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University of Washington Health Sciences Library, Seattle (Pacific Northwest)
University of California Biomedical Library Center for the Health Sciences, Los Angeles (Pacific Southwest)

The following two Regional Medical Libraries are also due to become operational early in 1970:

New York Academy of Medicine, (New York and Northern New Jersey)
Emory University, Atlanta, (Southeastern)

In addition, the National Library of Medicine itself provides regional medical library services to the Mid-Atlantic Region.

Proposals from the two remaining regions--University of Nebraska, Omaha (Mid-Continental) and the University of Texas Southwestern Medical School at Dallas (South Central)--have been approved by the NLM Board of Regents and we anticipate that both will become operational during 1970.

The National Library of Medicine continues its efforts toward coordination of functions and services of the regional medical libraries through meetings, consultations and correspondence. The Library is also working toward the establishment of a national union list of biomedical serials in machine readable form, based on holdings reported by the regional medical libraries. It is intended that this data will serve as NLM's input to the National Serials Pilot Project.

One of the major current activities of the medical library network is the dispersing of MEDLARS (Medical Literature Analysis and Retrieval System) search services. During the past year three new MEDLARS service centers were established, at the College of Physicians of Philadelphia, the John Crerar Library, and the University of Washington, supplementing the eleven pre-existing centers in the United States. A number of the MEDLARS stations are integral units of regional medical libraries. All MEDLARS service areas have been adjusted to mesh with regional medical library boundaries.

Four new MEDLARS stations were also established abroad in 1969: at the National Institute of Health and Medical Research (I.N.S.E.R.M.) in Paris; the National Library of Australia, Canberra; the World Health Organization, Geneva; and the German Institute for Medical Documentation and Information (D.I.M.D.I.) in Cologne. With the stations already in operation in England and Sweden, MEDLARS services are now available to users in six foreign areas. Negotiations for the establishment of additional centers are under way with institutions in two other countries.

The importance of training to the efficient operation of the network has been emphasized by the Library's development of an audiovisual MEDLARS

User Orientation Program, adaptable for presentation to medical librarians and various medical library user groups; this is being offered at different MEDLARS centers. Additional training programs relating to other functional activities of the Library are also being developed.

To aid in the management of network operations, the Library also began publication of a monthly technical bulletin--Library Network/MEDLARS Technical Bulletin--in May 1969. Its purposes are 1) to communicate technical and management information among those with a need to know about medical library network and MEDLARS developments, and 2) to enable MEDLARS and network personnel to interact with NLM staff and each other on matters affecting their operation. Distribution of the Technical Bulletin is presently limited to those individuals or institutions who are directly involved in regional libraries, MEDLARS, or other network activities.

Abridged Index Medicus (AIM)

Beginning with January 1970, NLM will begin publication of a new monthly publication, Abridged Index Medicus, to be sold by the Superintendent of Documents at an annual subscription price of $12.00. Each issue will, in effect, contain a subset of the information found in the complete Index Medicus, with the citations appearing under the same subject headings. The articles cited will be those included in 100 English-language journals, which the Library selected with guidance from an advisory committee of physicians, medical editors, and medical librarians. Consideration was given to the quality of the journals, usefulness of journal content for the medical practitioner, and the need for providing coverage of all fields of clinical medicine.

Its select content and low cost should make it particularly useful and desirable to the individual practitioner/researcher, as well as to the libraries of small hospitals and clinics that have hesitated to subscribe to more comprehensive and costly bibliographies. In addition, the journals covered by Abridged Index Medicus are more likely to be those held by these smaller libraries. It is also possible that its select content will make it more useful to the clientele of reference or research collections in public libraries and/or the science and general libraries of universities.

Current Catalog SemiWeekly Proof Sheets

In line with our continuing efforts to disseminate cataloging information to the library community in the most expeditious and useful form possible, the Library began, early in calendar year 1969, an experimental semiweekly distribution of proof-listings of the production input for Current Catalog. These semiweekly proof sheets were sent to a selected group of medical librarians, and their comments and opinions concerning this potential service were solicited.

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Following the receipt and evaluation of comments concerning the experiment, it was decided that the distribution of these semiweekly proofsheets would be undertaken on a continuing basis beginning in January 1970. The proofsheets used in the experiment listed books in all languages and utilized the book catalog citation format. In line with suggestions made by the participants in the experiment, the scope of titles for inclusion is to be limited to English language titles published within the current and immediately preceding year. In addition, the citations will be printed in catalog card format, capable of being cut to 3x5 size for direct photocopy onto card stock.

Martin M. Cummings, M.D.

December 10, 1969

APPENDIX V

ASSOCIATION OF RESEARCH LIBRARIES

REPORT ON FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 1969

APPENDIX V

SEIDMAN & SEIDMAN *Certified Public Accountants*

Combined with BERNSTEIN, MINTZ & ARMBRUSTER

RESIDENT PARTNERS

MALCOLM I. MINTZ, C.P.A.
ROBERT BERNSTEIN, C.P.A.
ROBERT W. ARMBRUSTER, JR., C.P.A.
JOHN W. GRIFFITH, C.P.A.
MICHAEL L. BLOOM, C.P.A.

OFFICES IN VARIOUS CITIES
OF THE UNITED STATES

OTHER PARTS OF WORLD
BINDER-SEIDMAN-THORNE INTERNATIONAL GROUP

1200 EIGHTEENTH STREET, N.W.
WASHINGTON, D.C. 20036

January 27, 1970

Board of Directors
Association of Research Libraries
Washington, D. C.

Gentlemen:

We have examined the balance sheet (cash basis) of Association of Research Libraries as of December 31, 1969, and the related statements of cash receipts and disbursements for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We were furnished with a report on the Foreign Newspaper Microfilm Project prepared by Lybrand, Ross Bros., & Montgomery. The statements were prepared on the cash basis and the information has been included herein.

These statements have been prepared on the cash receipts and disbursements basis, and, as a result, omit material assets and liabilities. Accordingly, they do not, in our opinion, present financial position and results of operations as they would appear had generally accepted accrual basis accounting principles been applied in their preparation.

In our opinion, the accompanying balance sheet at December 31, 1969, and the related statements of cash receipts and disbursements for the year then ended present fairly the assets and liabilities arising from cash transactions and the revenues collected and disbursements made on a basis consistent with that of the preceding year.

Seidman & Seidman

SEIDMAN & SEIDMAN

APPENDIX V

ASSOCIATION OF RESEARCH LIBRARIES

BALANCE SHEET (CASH BASIS)
DECEMBER 31, 1969

ASSETS

Cash in bank and on hand	$ 5 553
Cash in savings account	13 889
Cash held by others - agency fund	87 146
Certificates of deposit	250 000
Deposits	237
Total	$356 825

LIABILITIES

Payroll taxes withheld	$ 3 696
Special program funds for which the Association is accountable to the grantors	166 380
Total liabilities	170 076

FUND BALANCES

Foreign Newspaper Microfilm Project agency fund	87 146
General operating fund	99 603
Total fund balances	186 749
Totals	$356 825

APPENDIX V

ASSOCIATION OF RESEARCH LIBRARIES

GENERAL OPERATING FUND
STATEMENT OF RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1969

RECEIPTS:	
Dues	$127 500
Publications	2 046
Royalties	751
Interest	10 442
Miscellaneous	3 560
TOTAL	144 299
DISBURSEMENTS:	
Auditing and legal	15 822
Board and committee expenses	18 385
Dues	892
Equipment purchases and rental	1 660
Executive secretary and staff travel	5 211
Hospitalization	639
Insurance and bonding	3 068
Miscellaneous	1 933
Payroll taxes	1 856
Periodicals and subscriptions	1 823
Printing and mailing	6 004
Postage and freight	2 038
Rent	6 222
Retirement plan	10 412
Salaries	83 246
Stationery and supplies	6 458
Telephone	2 388
TOTAL	168 057
Less: Administrative expenses charged to special program funds	18 821
	149 236
EXCESS OF RECEIPTS OVER DISBURSEMENTS	(4 937)
GENERAL OPERATING FUND BALANCE - BEGINNING	104 540
GENERAL OPERATING FUND BALANCE - ENDING	$ 99 603

APPENDIX V

ASSOCIATION OF RESEARCH LIBRARIES

FOREIGN NEWSPAPER MICROFILM PROJECT AGENCY FUND
STATEMENT OF RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1969

RECEIPTS:	
Dues	$ 44 476
Sales to members and non-members	102 688
Interest	525
TOTALS	147 689
DISBURSEMENTS:	
Audit	325
Miscellaneous	1 627
Newspapers and microfilm	36 007
Purchases for members and non-members	87 014
Salaries	15 045
Storage	280
Supplies	977
TOTALS	141 275
EXCESS OF RECEIPTS OVER DISBURSEMENTS	6 414
FUND BALANCE - BEGINNING	80 732
FUND BALANCE - ENDING	$ 87 146

APPENDIX V

ASSOCIATION OF RESEARCH LIBRARIES

SPECIAL PROGRAM FUNDS
STATEMENT OF RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1969

	Center for Chinese Research Materials	Book Storage Project	Study of Lighting Requirements for Libraries
RECEIPTS:			
Grants	$ 73 603	$	$
Sale of publications	15 686		
Other			
TOTALS	89 289		
DISBURSEMENTS:			
Administrative expenses	10 000		
Consulting fees		6 826	650
Cost of publications	32 402		
Editing		621	
Employee benefits	5 733		
Miscellaneous	482	55	
Office expense	2 956		
Payroll	44 172		
Payroll taxes	1 849		
Periodicals	667		
Postage	1 156		
Printing	149		
Purchase of equipment	2 685		
Rent	6 222		
Telephone	582		
Travel	2 750		121
TOTALS	111 805	7 502	771
EXCESS OF RECEIPTS OVER DISBURSEMENTS	(22 516)	(7 502)	(771)
FUND BALANCE - BEGINNING	89 451	22 173	1 616
FUND BALANCE - ENDING	$ 66 935	$14 671	$ 845

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University Library Management Study	Microform Technology Project #1	Microform Technology Project #2	Slavic Bibliographic and Documentation Center	National Serials Pilot Project	Totals
$20 000	$25 887	$ 2 289	$95 782	$ 25 007	$242 568
					15 686
	38				38
20 000	25 925	2 289	95 782	25 007	258 292
	3 424	1 735	2 500	1 162	18 821
	5 500	3 667			16 643
					32 [illegible]2
					621
			1 156	782	7 671
	140	50	833	1 379	2 939
			201	258	3 415
	10 000		8 327	6 843	69 342
			401	332	2 582
			24		691
			15		1 171
22 897					23 046
			2 930	385	6 000
			2 493	800	9 515
	73		204	144	1 003
	3 347	1 112	1 545	415	9 290
22 897	22 484	6 564	20 629	12 500	205 152
(2 897)	3 441	(4 275)	75 153	12 507	53 140
					113 240
$(2 897)	$ 3 441	$(4 275)	$75 153	$ 12 507	$166 380

APPENDIX V

ASSOCIATION OF RESEARCH LIBRARIES

PROOF OF CASH
FOR THE YEAR ENDED DECEMBER 31, 1969

CASH BALANCE - BEGINNING	$299 637
ADD: Excess of receipts over disbursements	
ARL general operating fund	(4 937)
Foreign Newspaper Microfilm Project Agency fund	6 414
Special program funds for which the Association is accountable to the grantors	53 140
	354 254
ADD: Payroll taxes fourth quarter 1969, paid January, 1970	3 695
LESS: Payroll taxes fourth quarter 1968, paid January, 1969	1 124
CASH BALANCE - ENDING	$356 825

ASSOCIATION OF RESEARCH LIBRARIES

NOTE TO FINANCIAL STATEMENTS
YEAR ENDED DECEMBER 31, 1969

Center for Chinese Research Materials

Cost of publications for the year amounted to $32,400 and revenues from the sale of publications amounted to $15,700. Officials of the Association have determined that there remained on hand at the end of the year an inventory of these publications amounting to $12,760. Since the books are maintained on the cash basis, inventories are not recorded. Therefore, we did not verify either the existence or the value of the inventory.

APPENDIX W

MEMBERSHIP OF ASSOCIATION OF RESEARCH LIBRARIES

January, 1970

University of Alabama Library
Tuscaloosa, Alabama 35486
W. Stanley Hoole, Librarian

University of Alberta Library
Edmonton, Alberta, Canada
Bruce Peel, Director

University of Arizona Library
Tucson, Arizona 85721
Robert K. Johnson, Librarian

Boston Public Library
Boston, Massachusetts 02117
Philip J. McNiff, Librarian

Boston University Library
Boston, Massachusetts 02215
John Laucus, Director

University of British Columbia Library
Vancouver 8, British Columbia, Canada
Basil Stuart-Stubbs, Librarian

Brown University Library
Providence, Rhode Island 02912
David A. Jonah, Librarian

University of California Library
Berkeley, California 94720
James E. Skipper, Librarian

University of California Library
Davis, California 95616
J. R. Blanchard, Librarian

University of California Library
Los Angeles, California 90024
Robert Vosper, Librarian

Case Western Reserve University Libraries
Cleveland, Ohio 44106
James V. Jones, Director

Center for Research Libraries
Chicago, Illinois 60637
Gordon R. Williams, Director

University of Chicago Library
Chicago, Illinois 60637
Herman H. Fussler, Director

University of Cincinnati Libraries
Cincinnati, Ohio 45221
Bruce Kaufman, Director

University of Colorado Library
Boulder, Colorado 80304
Ralph E. Ellsworth, Director

Columbia University Libraries
New York, N. Y. 10027
Warren J. Haas, Director

University of Connecticut Library
Storrs, Connecticut 06268
John P. McDonald, Director

Cornell University Libraries
Ithaca, New York 14850
David Kaser, Director

Dartmouth College Libraries
Hanover, New Hampshire 03755
Edward C. Lathem, Librarian

Duke University Libraries
Durham, North Carolina 27706
Benjamin E. Powell, Librarian

University of Florida Libraries
Gainesville, Florida 32603
Gustave A. Harrer, Director

Florida State University Library
Tallahassee, Florida 32306
N. Orwin Rush, Librarian

APPENDIX W

Georgetown University Library
Washington, D. C. 20007
Rev. James B. Horigan, Director

University of Georgia Libraries
Athens, Georgia 30601
W. P. Kellam, Director

Harvard University Library
Cambridge, Massachusetts 02138
Douglas W. Bryant, Librarian

University of Illinois Library
Urbana, Illinois 61803
Robert B. Downs, Dean of Library Administration

Indiana University Libraries
Bloomington, Indiana 47405
Robert A. Miller, Director

University of Iowa Libraries
Iowa City, Iowa 52240
Leslie W. Dunlap, Director

Iowa State University Library
Ames, Iowa 50010
Warren Kuhn, Director

John Crerar Library
Chicago, Illinois 60616
William S. Budington, Director

Johns Hopkins University Library
Baltimore, Maryland 21218
John H. Berthel, Librarian

Joint University Libraries
Nashville, Tennessee 37203
Frank P. Grisham, Director

University of Kansas Library
Lawrence, Kansas 66044
David W. Heron, Director

University of Kentucky Libraries
Lexington, Kentucky 40506
Stuart Forth, Director

Library of Congress
Washington, D. C. 20540
L. Quincy Mumford, Librarian

Linda Hall Library
Kansas City, Missouri 64110
Joseph C. Shipman, Librarian

Louisiana State University Library
Baton Rouge, Louisiana 70803
T. N. McMullan, Director

McGill University Library
Montreal 2, Quebec, Canada
Keith Crouch, Director

University of Maryland Library
College Park, Maryland 20742
Howard Rovelstad, Librarian

University of Massachusetts Libraries
Amherst, Massachusetts 01003
David Clay, Director

Massachusetts Institute of Technology Libraries
Cambridge, Massachusetts 02139
William N. Locke, Director

University of Michigan Library
Ann Arbor, Michigan 48104
Frederick H. Wagman, Director

Michigan State University Library
East Lansing, Michigan 48823
Richard Chapin, Librarian

University of Minnesota Libraries
Minneapolis, Minnesota 55455
Edward B. Stanford, Director

University of Missouri Library
Columbia, Missouri 65202
C. Edward Carroll, Director

National Agricultural Library
Beltsville, Maryland 20705
John Sherrod, Director

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National Library of Medicine
Bethesda, Maryland 20203
Martin M. Cummings, Director

University of Nebraska Libraries
Lincoln, Nebraska 68508
Frank A. Lundy, Director

New York Public Library
New York, N. Y. 10018
Edward G. Freehafer, Director

New York State Library
State Education Department
Albany, New York 12224
John A. Humphry, Assistant
Commissioner for Libraries

New York University Libraries
New York, N. Y. 10003
Charles F. Gosnell, Director

University of North Carolina
Libraries
Chapel Hill, North Carolina 27515
Jerrold Orne, Director

Northwestern University Libraries
Evanston, Illinois 60210
Thomas R. Buckman, Librarian

University of Notre Dame Libraries
South Bend, Indiana 46556
Rev. James W. Simonson, Director

Ohio State University Libraries
Columbus, Ohio 43210
Lewis C. Branscomb, Director

University of Oklahoma Library
Norman, Oklahoma 73069
Arthur M. McAnally, Librarian

Oklahoma State University Library
Stillwater, Oklahoma 74075
Roscoe Rouse, Librarian

University of Oregon Library
Eugene, Oregon 97403
Carl W. Hintz, Librarian

University of Pennsylvania Libraries
Philadelphia, Pennsylvania 19104
Rudolf Hirsch, Associate Director

Pennsylvania State University Library
University Park, Pennsylvania 16802
W. Carl Jackson, Director

University of Pittsburgh Library
Pittsburgh, Pennsylvania 15213
C. Walter Stone, Director

Princeton University Library
Princeton, New Jersey 08540
William S. Dix, Librarian

Purdue University Library
Lafayette, Indiana 47907
Oliver C. Dunn, Associate
Director

University of Rochester Libraries
Rochester, New York 14627
Ben Bowman, Director

Rutgers University Library
New Brunswick, New Jersey 08901
Roy L. Kidman, Director

St. Louis University Library
St. Louis, Missouri 63108
Eugene P. Kennedy, Director

University of Southern California
Library
Los Angeles, California 90007
Lewis F. Stieg, Librarian

Southern Illinois University Library
Carbondale, Illinois 62901
Ralph E. McCoy, Director

APPENDIX W

Stanford University Libraries
Stanford, California 94305
David C. Weber, Director

State University of New York at Buffalo Libraries
Buffalo, New York 14214
Myles Slatin, Director

Syracuse University Library
Syracuse, New York 13210
Warren N. Boes, Director

Temple University Library
Philadelphia, Pennsylvania 19122
Arthur Hamlin, Director

University of Tennessee Libraries
Knoxville, Tennessee 37916
William H. Jesse, Director

University of Texas Libraries
Austin, Texas 78712
Fred Folmer, Librarian

Texas A&M University Library
College Station, Texas 77843
John B. Smith, Acting Director

University of Toronto Libraries
Toronto 5, Ontario, Canada
Robert H. Blackburn, Chief Librarian

Tulane University Library
New Orleans, Louisiana 70118
John H. Gribbin, Director

University of Utah Library
Salt Lake City, Utah 84112
Ralph D. Thomson, Librarian

University of Virginia Libraries
Charlottesville, Virginia 22903
Ray Frantz, Librarian

University of Washington Library
Seattle, Washington 98105
Marion A. Milczewski, Director

Washington State University Library
Pullman, Washington 99163
G. Donald Smith, Director

Washington University Libraries
St. Louis, Missouri 63130
Andrew J. Eaton, Director

Wayne State University Library
Detroit, Michigan 48202
Robert Grazier, Acting Director

University of Wisconsin Libraries
Madison, Wisconsin 57706
Louis Kaplan, Director

Yale University Libraries
New Haven, Connecticut 06520
Rutherford D. Rogers, Librarian